

ROTUNDA

the magazine of the Royal Ontario Museum

**BLACKFOOT
BEADWORK:
A TRADITION
EMBROIDERED
IN GLASS**

**FACT AND
FICTION ABOUT
DINOSAUR LIFE**

**CANADIAN
CERAMICS
IN ASIAN
TRADITIONS**

**REPORTING
ON YOUR
VALUABLES**

**THE RAW
GOURMET**

VOL. 29/No. 1
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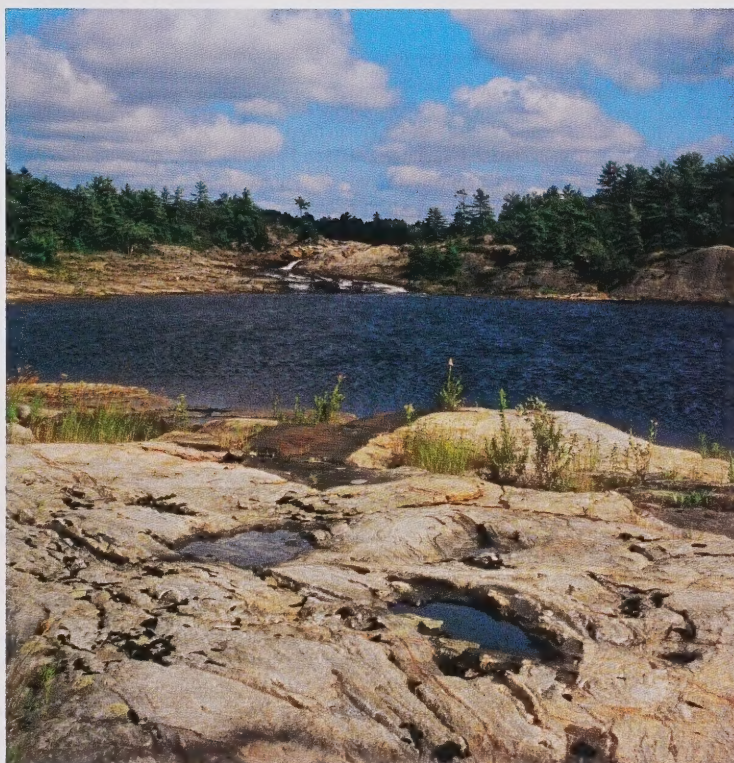
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BRIAN BOYLE

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EDITOR'S NOTE

As the cover of this issue hints, there is much more to Plains Indian beadwork than normally meets the eyes of the general public. Most of us are familiar with Indian beadwork on moccasins, belts, and other small items found in tourist shops. Some of it is very attractive, but given the market for which it is made, a lot is very kitschy. Therefore I was certainly unprepared for the spectacular array of material in the ROM's collections when Arni Brownstone of the Museum's Department of Anthropology invited me to take a peak.

The material I saw was collected mostly at the end of the 19th century by Fred Stimson, the larger-than-life proprietor of the Bar U Ranch in southern Alberta. It consists of head-to-foot regalia created and worn by the Blackfoot. Not only are the colours and patterns mesmerizing, but for someone who is as inept at handiwork as myself, the realization of how much skill and labour was required to produce such work is overwhelming. I hope you will be equally delighted by the visual display and history in Arni's story.

During March Break I had the wonderful opportunity to spend several hours with a replica of the best *Tyrannosaurus rex* skeleton found to date. The skeleton was on public display and my job was to answer questions posed by visitors and to ensure that small fans did not go head first over the rope barriers. My favourite question was from a little girl who wanted to know if dinosaurs died on their feet, a logical question given that the skeletons are always mounted standing. But this and other questions posed by visitors of all ages just reminded me that in spite of the enormous amount of popular scientific literature on dinosaurs, people's



imagination often overwhelm fact on this subject. Hans Sues of the ROM's Department of Palaeobiology explains what scientists can and cannot learn about dinosaurs.

Raphael Yu's favourite objects must be appreciated at a level that is certainly more intimate than that of dinosaurs. His passion for Oriental ceramics extends to his collection of ceramics by Canadian artists working in Asian traditions. By using historical pieces from the ROM's collections as references, Yu shows the Asian influences in the Canadian pieces as well as their individuality and striking beauty. The objects he discusses in his article and others are currently on display at the Museum.

For those of you who own, used to own, or have visited a cottage in Muskoka, the article by Sydney Lumbers, curator emeritus in the Department of Earth Sciences, should bring back some happy memories. The rocky outcrops are one of the striking features of this Ontario region. Lumbers has had a lifelong curiosity about the rocks of Muskoka and spent a great deal of his career with associate Vince Vertolli, analyzing and mapping the geological formations. Yes, it is well known that the rock of Muskoka is primarily granite, but there is much more to granite than meets the uninformed eye. This article can serve as an introductory rock guide and a pleasant break from the annual task of opening and airing the cottage for the summer.

May you enjoy your summer with visits to the Royal Ontario Museum and cottage country.

Sandra Shaul

SANDRA SHAUL

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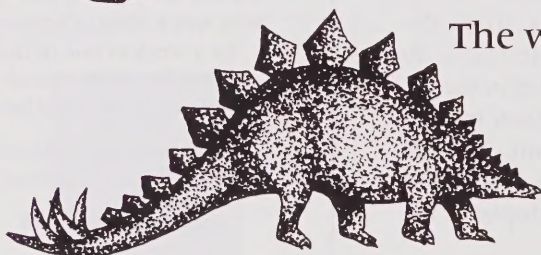
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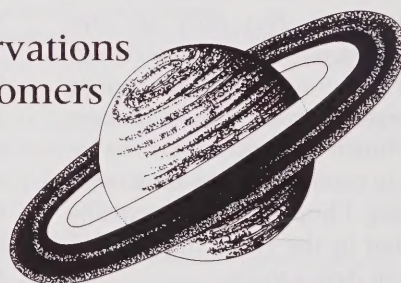


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PHOTOGRAPHY BY BRIAN BOYLE



An 18th-century Scottish dirk, its sheath, and accompanying knife and fork enhance the ROM's collection of Scottish bladed weaponry.

Scottish Dirk Enhances European Collections

THE SMALL COLLECTION OF SCOTTISH bladed weapons at the Royal Ontario Museum has been enhanced by a generous donation from Mrs. Muriel Savage and Mrs. Mary Chen-

hall of an impressive late-18th-century dirk and its accessories—a leather sheath, a smaller knife, and a two-pronged fork. Dirks are among the most characteristic of Scottish

weapons, and were once mainly associated with the Highlands. Their shape suggests an evolution from earlier medieval daggers. Scottish effigies of the 1500s depict dirks. Sur-

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GROWING COLLECTIONS CONTINUED

viving examples, however, generally date to after the late 1600s.

The carved decorations and silver mounts on the pieces are among the most useful stylistic features in dating the dirks and sheaths. The dirks' black wooden hilts were carved in low-relief Celtic interlace ornament until the early 1700s; after about 1760, the carving often took the form of simulated basketwork set with small silver studs. By the end of the 1700s, hilts were often of baluster shape with silver mounts decorated with fashionable neoclassical engraving. The wooden hilt of the dirk donated to the ROM is of baluster form, ornamented with carved basketwork, symmetrical knots, and shallow fluting in low relief.

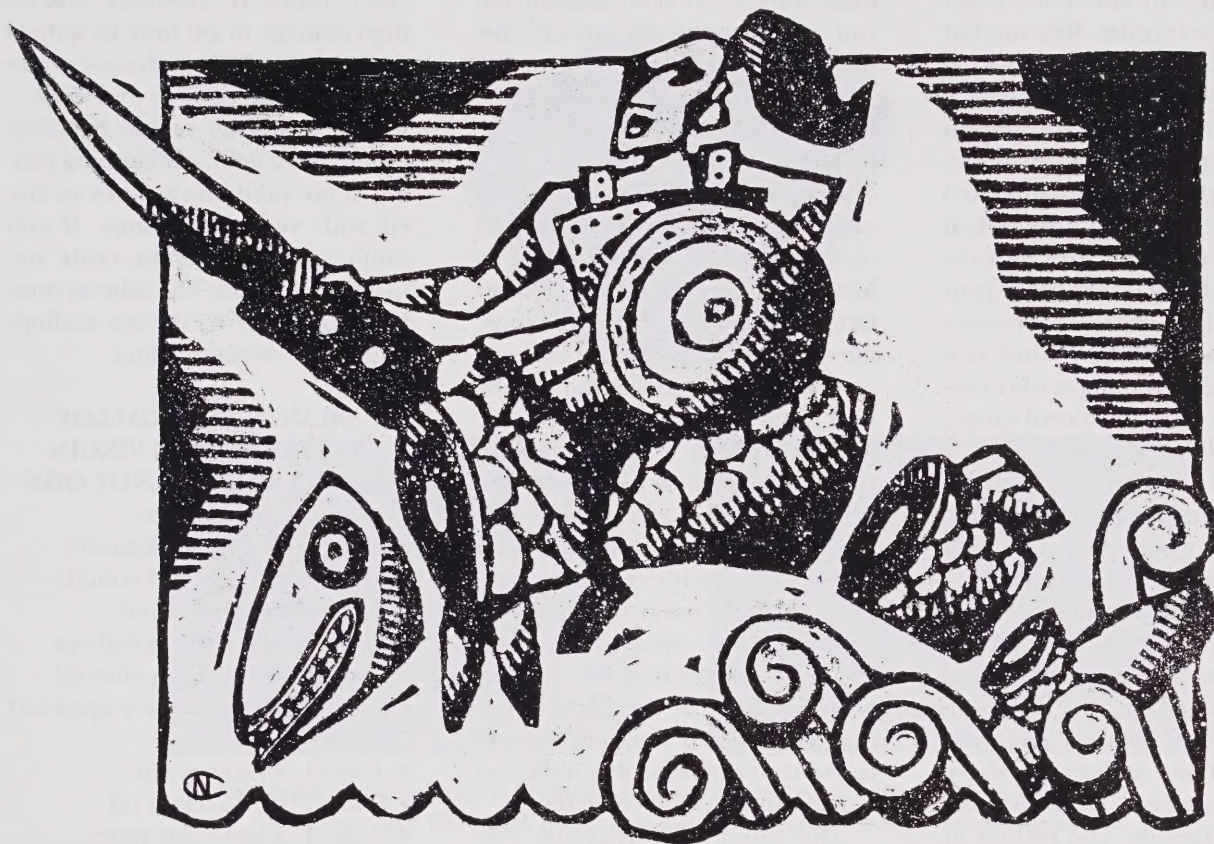
Silver mounts with pierced decoration and engraved neoclassical ribbons adorn the leather sheath of the Museum's new piece, and small silver studs provide more embellishment to the handles of the small knife and fork. The silver mounts on the leather sheath are engraved with the inscription "TO/Alexr Smith MD" and "GARDNER & CO/EDINBURGH." Silver mounts on the dirk are inscribed "Charles Stewart/Ardsheal Esq." and a silver disc-shaped pommel cap on top of the grip bears an engraved crest and the motto "QUHIDDER WILLZE." The blades of the dirk and small knife are stamped "BOOG."

These inscriptions clearly identify the dirk and its accessories as Edinburgh work. The name "BOOG" on the two blades relates to a well-known family of Edinburgh cutlers. Based on style, the ensemble dates to around 1795.

The dirk and its accessories represent the union of several artisans: the cutler, woodcarver, silversmith, and leatherworker. More than a weapon, the dirk was a potent symbol of national identity and a masterpiece of decorative art.

K. COREY KEEBLE

K. Corey Keeble is an associate curator in the Department of Western Art and Culture



Tartare Hordes

FOR THE PAST DOZEN YEARS OR SO, the Japanese have beguiled us with the perfect cuisine for our times: a natural belt-tightener, limited in fats and oils to the point of austerity, exquisitely landscaped for the eye, and executed with samurai precision. Whether or not it is one of the world's great cuisines is arguable, but the best of it is not cooking at all. The purity of Japanese is expressed most artfully in food that has never kissed a flame. In the Land of the Rising Sun, nobody is above the raw.

To appreciate the Japanese passion for raw fish, simply pay a visit to Tokyo's Tsukiji wholesale fish market, the largest of its kind in the world, a Disneyland of fish and seafood. Savvy visitors arrive by 5:30 am for the tuna auction, in which hundreds of carcasses are up for

grabs. In the frenetic bidding, a single two-metre-long tuna can fetch more than US\$20,000.

Sushi and sashimi may be household words in Toronto and Vancouver, but the Japanese penchant for the raw goes far beyond these conservative standards. My unforgettable date with raw was fugu, the homely blowfish whose innards contain a toxin 275 times more powerful than cyanide. By law, the preparation of fugu requires 30 different steps. A fugu chef must study for nine years before earning his licence. Dainty rosettes of the raw, translucent flesh are the aesthetic highlight of what can easily be a \$700 lunch. I thought of the scores of Japanese fishermen who meet their maker by dallying with fugu. My chopsticks shuddered.

Nor is raw confined to fish and

seafood. On a journey through Hokkaido, the northernmost of Japan's islands, I was served raw horse with the customary soy and *wasabi*, the fiery Japanese horseradish, and was seen leaving the restaurant at a gallop. A colleague, recently returned from Tokyo, found herself in a Shibuya district restaurant specializing in raw *chicken*, of all things, dipped in soy and ginger. She was reluctant, but business was booming and nobody had keeled over, so why not? Much to her surprise, she reported, it was delicious.

There is reason to consume fish and seafood raw, or at least rare. As Harold McGee points out in his scholarly *On Food and Cooking* (H. B. Fenn, \$28.95), fish have a muscular structure and connective tissue so fragile, the slightest overcooking

causes it either to disintegrate or to become tough and dry. Of course, our most ancient ancestors didn't have time for niceties. Raw was fast food, and the discovery of cooking fire, the very beginning of *cuisine*.

The aesthetics of raw are a recent discovery prompted by an abundance of pure, uncontaminated foods. What is it about raw? "When you cook something, you also destroy something," explains Jean Pierre Challet, chef at Toronto's Auberge du Pommier. "When it is raw, you taste something as it is in *nature*, with its own nutritional values, its own fats. Like caviar and oysters, it is pure and undestroyed. It is also perfect because it *must* be perfect. It cannot be any other way or you will smell and taste the imperfections. I like it, too, because the more you eat raw, the more you develop your own taste, your own palate, your sense of adventure. You *learn*."

"Remember," says my wife, who prefers beef and salmon raw above all, "the Japanese value texture more than flavour. The texture of raw, without the structural change that happens with cooking, is silky and sensual on the tongue. It has, too, a certain sweetness peculiar to the fresh and pure, and it fills the mouth."

Problem is, just as Canadians are starting to abandon incinerated brick of frozen whitefish for fresh and more interesting fish—salmon, tuna, char, oysters, and scallops—concerns about bacterial and parasitic contamination have moved in like a Newfoundland storm. Some physicians suggest you nuke everything, flavour included. The federal Department of Fisheries and Oceans, however, maintains that neither parasites nor bacterial contamination exist in the big three: salmon, scallops, or tuna. Cod and herring are prone to parasites, but nobody eats those fish raw. Toronto's Department of Public Health has never received a complaint about a Japanese restaurant. Undercooked hamburger and chicken are far likelier hazards.

In any event, you can remove all doubt by freezing fish at minus 20°C for at least 24 hours. Yes, this may cause some textural breakdown, but you can eat without anxiety. Besides, *all* the tuna arriving at the Tsukiji fish market happens to be frozen. If it's good enough for the Japanese, it's okay by me.

Beyond sashimi and sushi lies an international gamut of tartares and carpaccios. The Regent Hotel in Jakarta proffers a daring lobster tartare in its restaurant, Asiatique, the wobbling flesh of the crustacean garnished with noodles and wasabi. Beef tartare is a standard in France, sometimes with a substitution of chopped horsemeat and always with *frites*. Middle Eastern eateries prepare their cultural spin with lamb tartare stirred with cracked wheat, pine nuts, and cumin. Ceviche is the Latin American ambassador of raw, although the seafood has actually been "cooked" by the citrus dressing. Salmon and tuna tartares are celebrities on fashionable menus in Canada and the United States.

The range of carpaccios, raw meat or fish dressed in olive oil and herbs or shaved Parmesan cheese, is booming with the availability of high-quality, high-ticket food items. The classic beef carpaccio of thinly sliced raw tenderloin was invented in Harry's Bar in Venice, and named for a Venetian painter of the Renaissance. In Australia, I've eaten carpaccios of kangaroo and wallaby, and found them exemplary. Nowadays, the carpaccio palette extends to salmon, tuna, duck, lamb, veal, and venison. I wouldn't be surprised to see Ontario pork or Alberta buffalo join the list, but the chef might have to tenderize the latter with a sledgehammer.

Now that good weather—*hot* weather—is on the way, raw may be the perfect ticket. Tartares are nutritious, light, and delicious. They require neither stove nor barbecue. They're easy to prepare. Excellent fillets of fishes and cuts of meat can be found in Toronto, and with proper refrigeration they're safe to eat.

Fugu, by the way, isn't available

in Canada, not because it's banned, as it is in the United States, but because recession-plagued Canadians can't afford it. However, should fugu manage to get here in spite of the economy, I want advance notice so I can be out of town that week.

The following recipe by Carol Clemens is a light, exhilarating pairing of two premium tartares accented with subtle dressings. If you don't fall for this one, odds are, raw's not for you. The salmon must be impeccably fresh, the scallops plump and sweet-smelling.

SALMON AND SCALLOP TARTARES WITH VIRGIN OLIVE AND HAZELNUT OILS

Ingredients

- 300 g (10 oz) fresh Atlantic salmon, skinned and boned, with belly flap removed
- 250 g (8 oz) fresh sea scallops
- 15 ml (1 tbsp) virgin olive oil
- 8 ml (1 1/2 tsp) freshly squeezed lemon juice
- 1 ml (1/4 tsp) sea salt
- 5 ml (1 tsp) hazelnut oil
- 3 ml (1/2 tsp) white wine vinegar
- chive sprigs and lemon peel cut into florets as a garnish

Method

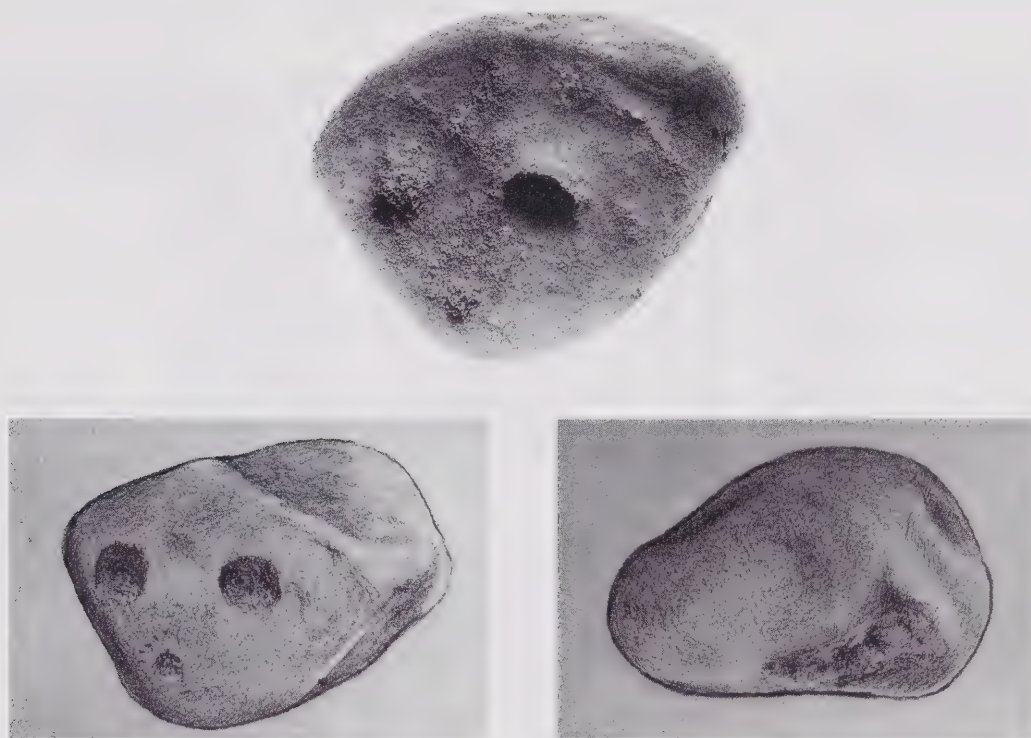
Rinse the salmon and scallops under very cold water. Pat dry with a paper towel. Chop the salmon fillet finely with a sharp knife. Transfer to a bowl and gently mix in the olive oil, lemon juice, and 1/2 ml (1/8 tsp) of sea salt. Cover tightly and refrigerate 15 to 30 minutes.

Chop the scallops finely with a sharp knife. Transfer to a bowl and gently mix in the hazelnut oil, vinegar and remaining sea salt. Cover and refrigerate 15 to 30 minutes.

To serve, shape the salmon and scallops into teardrops and arrange them like two interlocking half-moons on the plate. Garnish with chive sprigs and lemon peel florets. Serves four as an appetizer, two as a main course.

JEREMY FERGUSON

Jeremy Ferguson is a food and travel writer based in Toronto



The sketch on the bottom left illustrates the simple face pecked onto a pebble (top) at least 3000 years ago. The sketch on the bottom right shows the reverse. The pebble was found in a backyard in Metropolitan Toronto.

A Face from Toronto's Past

IN 1987, WHILE I WAS WORKING AT THE Boyd Conservation Archaeological Field School north of Toronto, a young girl brought an object to me for identification. The piece, a bifacially worked knife, had been discovered in her family's backyard by her brother when he was a boy. In the fall of 1987, Mr. and Mrs. Milner, the children's parents, kindly allowed me to test to see if a site was present by their home in North York, a suburb of Toronto. Three days of excavation uncovered a chert blade 36 cm below the surface in the muck of the ravine of a nearby creek.

On 30 May 1988 formal excavations began, which produced nothing that would help to date the site or assist in interpreting its function. Then on the morning of 20 June, a small pebble caught my attention for some reason. As I rubbed the

dirt from one flat surface it quickly became apparent that this seemingly ordinary stone was most remarkable. On this surface of the triangular-shaped pebble, only 20 mm long and 26 mm wide, there were three pecked indentations that unquestionably represented the eyes and mouth of a human face.

Syd Lumbers of the ROM's Earth Sciences Department identified the pebble as quartzite, which could have been picked from a riverbed. The obverse of the pebble is unpolished, while the reverse has a light polish, suggesting that it was rubbed.

What is the story behind this miniature carving? The Milner site is adjacent to the Hill site, another backyard, at which the earliest ceramics firing site in Ontario was found (see *Rotunda* volume 27, number 3, Winter 1994/95). The sites are likely

part of a series of camps that were located along the elevated terrace in the ravine. A spring wells up where the Hill and Milner property lines meet. It feeds the creek, which eventually drains into the Don River. Because the creek is naturally salty, it is commonly called Deerlick Creek. The salty water probably attracted animals, including game such as deer. I had dated the Hill site to c. AD 1298. The available data indicates that the Milner site is much older and was occupied by different people and for a different purpose.

There are no archaeological features such as pits or hearths at the Milner site, only artifacts such as a broken stone projectile point from what has been called the Small Point Tradition. Dating the point leads me to believe that the campsite was occupied in what archaeologists call

PHOTOGRAPH BY BRIAN BOYLE ILLUSTRATIONS BY EMIL HUSTON

the Late Archaic period (c. 1500 to 1000 BC). The artifact found during the Milner test excavation, the Meadowood blade, also dates around 1000 BC. Therefore, a conservative estimate dates the pebble to about 1500 to 1000 BC. Archaeologists know very little about the cultural ancestry of the Archaic peoples or about the languages spoken by them. It is believed that they were nomadic throughout the northeast.

The Milner site was probably a temporary camp where the broken stone tips of small spears or lances were replaced. Deer and other small mammals may have been hunted and butchered there. Bases of points, similar to four found on the Milner site, are often located at such sites, suggesting that broken points were being discarded and new points attached to spears.

Images of humans, animals, and supernatural beings most often appear on artifacts from the recent Iroquoian period of native occupation, starting about AD 1250 and peaking

about AD 1600. Older images are rare. When human images are found on objects dating to about AD 1000 and earlier, they are usually pecked on stone. The Iroquoian artifacts were made from a variety of materials, including stone, shell, antler, and ceramics. Human faces appear most frequently on smoking pipes, and would face the smoker.

Researchers of Iroquoian material are trying to determine the significance of the human image on such artifacts. It was once thought by some that the faces on pre-European-contact Iroquoian smoking pipes were the precursors of the images portrayed on post-contact Iroquoian False Face masks. In a 1978 study of 85 Seneca smoking pipes and 264 False Face masks, conducted by Zena Mathews, it was concluded that the "faces on pipes, figurines, and other objects (including maskettes) rarely exhibit a close stylistic relationship" with False Face masks. Another possibility was that the faces indicated other ceremonial events.

In the mid 1980s, Dr. Herb Kraft

investigated human effigies from archaeological sites of the Lenape peoples of coastal New Jersey and the Hudson and Delaware river drainage system, from about AD 1350 to the European-contact period. Kraft has argued that the human image represented a spirit being, a *manëtu*, who was the "Masked Being" or "Keeper of the Game" responsible for ensuring the health and safety of the animals in the forest.

Whether such ideas can be applied to the distant past is impossible to say. However, it is possible that the small pebble from the Milner site was a talisman in a personal ceremonial bundle. Certainly, after some 3000 years, it still conveys an incredible sense of power.

A final word to those professional archaeologists who work on excavations and those who work in gardens: check all your pebbles.

MIMA KAPCHES

Mima Kapches is head of the Department of Anthropology, Royal Ontario Museum

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In the August
issue of *Rotunda*...

The Good News About Zebra Mussels

By David Barr



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To carry small items, Plains Indians used pouches decorated with beadwork, suspended from their belts. A pipe bag with animal motif and a cartridge case are shown on a belt; (upper row from left to right) three pouches for face paint, three awl cases, and a knife sheath; (bottom row) two ration-ticket cases.



TRADITION EMBROIDERED IN GLASS

Plains Indian beadwork is truly an art of the people, reflecting the traditions, aesthetic values, and the unique circumstances of their existence

ARNI BROWNSTONE

LIFE ON THE CANADIAN PLAINS CHANGED profoundly for the Indians during the final quarter of the 19th century. In the case of the Blackfoot, after they signed a treaty in 1877 and participated in the last buffalo hunt in 1880, their

nomadic existence ended and they found themselves destitute, confined to the reserves. Soon after, however, the Department of Indian Affairs implemented a ration system, which not only provided relief, but left the Blackfoot

Arni Brownstone is a curatorial assistant in the Department of Anthropology, ROM

In the summer of 1907, Weasel Calf and his wife posed in full beaded regalia for the photographer,

with a lot of leisure time. Leisure time had been used traditionally for dance and celebration. From the 1880s until about 1900, "a veritable epidemic of society dances and ceremonials sprang

opposition to Indian cultural events. In fact, after the 1860s, when Venetian glass beads replaced porcupine quills as the most important visual medium of Canadian Plains Indian art, any item of hide

or cloth—from moccasin soles to eagle bonnet brow bands, from horse headstall to crupper—could be transformed by the beadworker's needle. Beaded regalia heightened the visual impact of events such as dances, grand entries to trading posts or distant Indian camps, and warfare.

Winters were spent decorating items that would be shown off for the first time as everyone prepared for the spring decampment. About 1845, Father De Smet, one of the most active missionaries in America, described a spring decampment of a northern Plains tribe: "All the garments and articles prepared during the winter, from the embroidered leggings and moccasin to the eagle-plumed head-piece, adorn their bodies for the first time, and the whole assembly appears quite brilliant; the camp acquires new life." Jean Goodwill, a Plains Cree, describing the importance of the continuation of Plains Indian ceremonies in the 20th century, wrote that dance is, "the essence of their culture, the expression of their spirituality and traditions."

From the late 19th century until the early 1950s, the practice of traditional Indian ceremonies was subjected to two conflicting forces outside the

native communities. On one side some missionaries and zealots from the Department of Indian Affairs waged a tireless campaign to eradicate native cultural events. Indian Affairs, for example, tried to replace traditional dances with sports days. These were often held after Dominion Day treaty payment and featured non-Native dancing, races, and picnics.

Artist Edmund Morris wrote in 1908 that the Assiniboines "arranged that



Edmund Morris. Weasel Calf was head of the Black Soldiers society of the Blackfoot. She was a medicine woman and head of the all-female Matoki society.



up," according to anthropologists Lucien and Jane Richardson Hanks. And as it had been in the past, beaded regalia was one of the most important components of the celebrations.

The creation of embroidered beadwork not only continued throughout the Indians' transition from nomadic to reserve life but, like the celebrations for which the embroidered pieces were made, survived in spite of considerable

once a year they should hold a great dance to perpetuate their old customs & dances & the women spent a year making the bead work dresses but the agent got word of it and stopped them promptly." Father Hugonard, principal of the Indian residential school at Lebret at this time, stated that dance and the devotion of energies to "the making of new and better dance costumes and painting their faces in some new way for every dance" were responsible for an increase in immorality and the neglect of farms.

On the other side, native participants managed to persist with their traditional dance and regalia on sports days and other such occasions, which enraptured the growing audiences of white settlers from towns close to the reserves. White communities began to invite Indians to dance and parade in traditional regalia at civic events such as agricultural fairs and stampedes. In response, the Indian Act of 1895 was passed, enabling agents of Indian Affairs to prohibit traditional Plains Indian ceremonies. Yet enforcement of the law varied with the fervour of the local clergyman or agent. In 1901 Indian Affairs hired detectives to monitor the activities of Indians attending the Brandon Fair, and in 1909 a Calgary newspaper described a pageant that included 600 Stoney, Blackfoot, Sarcee, Peigan, and Blood forming "war parties" with participants dressed in "fearfully, wonderfully and truly made" outfits.

As buffalo hunters, nomads, and warriors, the Blackfoot symbolized the romantic image of the Plains Indians in the minds of Canadians. In 1913 Blackfoot were persuaded by organizers of the Winnipeg Stampede to compete for prize money offered for the best-decorated traditional outfits. The stampede

paid the travel expenses of the competitors from Alberta, and gave them food rations and \$25 per tent for a maximum of 25 tents.

In spite of the great production of

Harold and Jean Healy, members of the Blood tribe, pose at the Head Smashed-In Buffalo



beadwork that began about 1880, it appears that by the early 20th century the Blackfoot suffered a shortage of regalia. In a letter written by the granddaughter of Dr. O. C. Edwards, physician on the Blood reserve from 1902 to 1915, she states: "When the Duke and Duchess of Connaught came to Canada and were in Fort McLeod [in 1911] the [Blackfoot] Indians put on a parade and as they did not have enough ceremonial

Jump site in southern Alberta. They have won awards for their contemporary beaded regalia at powwows all over North America.



Early Blackfoot beadwork is characterized by a kinetic quality achieved by the arrangement of soft colours alongside jet black. After 1910, the beadwork has a lighter and brighter palette.



headdress, etc. they borrowed from my grandmother." Edmund Morris, who painted portraits of the Indians between 1907 and 1910, collected more than 200 Blackfoot artifacts. He wrote in 1911 to Sir Edmund Walker, founding chairman of the Royal Ontario Museum to say, "I am going out to Morley [the Stoney reserve] as the Blackfeet are losing their characteristics." The Blackfoot were able, however, to meet demands for their beadwork by the second decade of the 20th century, when agricultural fairs, notably the Calgary Stampede, were in full operation. By 1900, the burgeoning tourist industry in Banff included colourful exhibitions of

Indian culture with parades, dances, tipi villages, and other activities performed by the local Stoney tribe. Norman Luxton, owner of the Banff Trading Post, influenced the nature and volume of beadwork produced by the Stoney for his enterprise.

The Blackfoot period of transition to reserve life coincided with the birth of modern anthropology and ethnology departments in North American museums. Ethnologists and anthropologists considered traditional Indian material culture to be at peril, and so museums dispatched staff to collect in the field or to commission others to do it for them. Consequently, many letters and hun-

PHOTOGRAPH BY BRIAN BOYLE



dreds of artifacts were exchanged between missionaries and employees of Indian Affairs located near Blackfoot communities and staff at the Smithsonian Institution, the Field Museum, the American Museum of Natural History, and the British Museum. Most of the Plains Indian material now in the possession of the Royal Ontario Museum was also acquired during this period of intense collecting.

Among the finest and largest donations of beadwork to the ROM is the Stimson collection. Fred Stimson, one of the West's more colourful figures, was the founder and manager of the Bar U Ranch in the Alberta foothills be-

tween 1882 and 1902. His collection first came to the attention of the ROM in 1931 when Agnes Joynes, a member of the Museum's public, wrote to T. F. McIlwraith, curator of the Ethnology Department, to inform him that Fred Stimson's son Bryce lived in Toronto in a home full of beadwork. Bryce Stimson was contacted and subsequently bequeathed the collection of 300 items to the ROM. The collection arrived in two lots, one in 1944 and the second two years later.

While the collection is wonderful to behold, the accompanying documentation is incomplete and potentially misleading. The original Museum acces-

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Beaded strips were sewn to the sides of leggings and down the sleeves of shirts. Rosettes were also used to decorate shirts.



Fred Stimson is pictured in 1893 wearing regalia now in the collection of the ROM.

sion records list the collection as “presumably Blackfoot” and “believed to be Blackfoot.” Agnes Joynes stated in her letter that the material is Plains Cree and that the collector “had been given

the few items that exhibit Lakota Sioux and Crow features.

However, it cannot be presumed that the remaining material is Blackfoot. According to historian Hugh Dempsey, “in the summer of 1888, there were lots of Indians in the Highwood area [near the Bar U]. The [North] Blackfoot, with their reserve thirty-five miles to the east, came to the foothills to hunt or visit their children in the boarding school at the mouth of the Highwood River. The Sarcee and the Stoney Indians, with their reserves a short distance north, also travelled through the area. And the Bloods and Peigans, far to the south, often passed through High River settlement on their way to visit other reserves.” Based on proximity to the Bar U, the Stimson beadwork would likely be Stoney, a northern Assiniboine nation, rather than Blackfoot, a confederacy that includes the Blood, Peigan, and North Blackfoot tribes. Fortunately, historical accounts exist that shed light on the frequency of Blackfoot and Stoney visits to the Bar U and its vicinity during the Stimson years.

Most accounts concur that from at least 1841 until the treaty-signing in 1877, Stoney territory lay in the foothills region extending from the Athabasca River south to the Montana border. This would situate the Bar U squarely on land once controlled by the Stoney. I could find, however,

only one reference to the Stoney in the area of the ranch during Stimson’s time. The Stoney did return frequently after 1905 when ranchers, short of labour, hired them as cowboys. In contrast, there are a number of reports of Blackfoot in the area of the Bar U during the Stimson era. About 1880 White Louse, a Blackfoot, and his extended family settled in a permanent camp near High River, the closest town to the

PHOTOGRAPH COURTESY GLENBOW ARCHIVES



Facing page: By the late 19th century nearly all Blackfoot wore manufactured clothes. Moccasins were the most enduring traditional clothing. Also shown are women’s leggings.



much of it by various Chiefs.” Stylistically, most of the items do not appear to be Cree. A notable exception may be a pair of leggings worn by Stimson in a photograph taken in 1893 that David Sager, a researcher, observed were identical to those worn by Chief Pakan of the Cree in an earlier photograph from 1886. Joynes also noted that some of the material had an “association with Custer’s army.” This probably is a reference to



After about 1860, the Blackfoot began to wear blankets, decorated with a beadwork strip, instead of buffalo robes with a quill-work strip. Today the beadwork strip is worn alone as a "stole," ostentatiously draped over the forearm.



ranch. The Glenbow Archives in Calgary house a written account from Bill Holmes, a longtime resident of High River, who recalled that around 1885, when he was a youngster, several Blackfoot women visited the Bar U. He also remembered the area around the ranch as being Blackfoot country before the Stoneys came to work on ranches. At least one other oldtimer recalled that

around 1900 a family of Blackfoot lived in a tipi close to the main house at the Bar U.

It is, however, Fred Stimson's personality, acquisitive nature, and rapport with the Blackfoot on his ranch, which together provide the strongest reason to attribute the beadwork to the Blackfoot. Identified in a British publication in 1891 as "the most successful rancher in





Canada," Fred Stimson managed one of the largest operations in the foothills. He owned 10,140 cattle and 832 horses that ranged on 63,940 hectares (158,000 acres) of leased land. In the *Canadian Cattleman*, J. R. Weston described Stimson: "He was a big, fine looking, powerfully built man of tremendous energy...recognized as the greatest story-teller and entertainer in the west. His

repertoire of stories was unlimited [and] he had stories to suit all occasions. He could entertain a drawing room audience, the elite of Montreal's society, with grace, charm, and wit, and on the other hand he could keep a gathering of tough and seasoned cowboys and range hands out of the round-ups in roars of laughter with his stories of another type."

.....
"Stimson was a great man to hunt and entertain.

His home was full of beadwork and stuff from the Indians"

Bill Holmes





Stimson naturally combined his talents as an entertainer with his interest in Native culture. A. A. Leitch, who provided some oral history for a recent study, recalled that a Blackfoot family camped at the Bar U “helped with domestic rather than ranch work, and their teenage son, Caypey, was well versed in Indian dances to entertain visitors. This skill would certainly have appealed to Stimson, who set much store on being a good host and had a deep interest in aboriginal culture.” In his account Bill Holmes recalled that “Stimson was a great man to hunt and entertain. His home was full of beadwork and stuff from the Indians.” Other accounts state that the ranch house was “adorned inside with quite a museum of Indian

stated that Stimson had a “penchant for purloining anything that he could lay his hands on....” In *Leaves from the Medicine Tree*, a local history published by the High River Pioneers’ and Old Timers’ Association, there is a story about the death of Mel Zimroze, a Bar U cowboy who fell from a bucking horse to his death. According to this account, “They were putting him in a box at the Bar U the next morning for burial, when old Stimson took a fancy to his boots. ‘Damn him, he won’t need those where he’s going to!’ and pulled the boots off.”

Because documentation of beadwork over the decades is often scarce, collections that have good records will be most valuable for research. The ROM is very fortunate. Last summer I was able

Rifle cases were showpiece items, particularly for mounted rides. In the 20th century the fringe on the case was considerably lengthened and repositioned under the beaded panels so that it would flow generously on either side of the rider.



relics [which] served to make the sitting room of his home one of the most interesting possible.”

There is little doubt that Stimson recognized, if not cultivated, the entertainment value of his collection, but there was also a genuine interest in Native culture. Holmes also wrote that “Stimson spoke Blackfoot very well” and “became an advocate of Native rights.” He apparently wrote at least one letter to a newspaper in support of Indian rights. The poem written by Charlie Millar on the occasion of his retirement in 1902 notes that the Indians “will miss their bread and jam since they lost their friend.”

On a more macabre note, Stimson’s desire to collect could be extreme. Harold Riley, another contemporary,

to conduct research across the prairie provinces, assisted by a grant from the Department of Museum Volunteers Fund of the Royal Ontario Museum. While at the Museum of the Highwood in High River, Alberta, I mentioned the Stimson Collection to the director, Lynn Cartwright, who informed me that the Bar U Ranch had just been designated a National Historic Site under the jurisdiction of Parks Canada. Staff at the ranch put me in touch with researchers across the country—Barbara Halliday in Calgary, Allan McCullough in Ottawa, and Simon Evans in Newfoundland—who were able to provide much information about Fred Stimson and his invaluable collection.

Indian beadwork has evolved in many directions in response to such factors as social and cultural pressures associated with the transition from nomadic to reserve life and the demands of non-Native markets. It is truly an art of the people, reflecting their traditions, aesthetic values, and the unique circumstances of their existence. ♡

Because documentation of beadwork over the decades is often scarce, collections that have good records will be most valuable for research

THE LIFE OF FACT

Can scientific research match the public's imagination?

ALTHOUGH PALAEOLOGISTS CAN DETERMINE WITH SOME CONFIDENCE THE BASIC skeletal structure of many dinosaurs from their petrified bones, there are not many respects in which dinosaurs can be compared closely with any present-day animals. We cannot exactly reconstruct what dinosaurs looked like in life and

there are important aspects of their life histories, such as colour, growth rate, reproductive patterns, and life expectancy, which we cannot directly examine. However, people want to see dinosaurs brought back to life—roaring and squeaking, engaging in mortal combat, and tenderly caring for their young. It is no surprise that Steven Spielberg's *Jurassic Park* is the highest-grossing movie to date. Ever since their recognition in 1842 as a distinct group of reptiles by the great Victorian anatomist Sir Richard Owen, dinosaurs have fascinated museum visitors and scientists alike.

How can palaeontologists learn anything at all about the biology of these long-dead animals? Starting in the late 1960s, scientists came to realize that dinosaurs were not simply overgrown, sluggish reptiles doomed to extinction, as conventional wisdom had it at that time, but were advanced, highly successful animals that were presumably capable of complex behaviour. New discoveries also conclusively established that birds are the direct descendants of small meat-eating dinosaurs. This revolution in our understanding of dinosaurs led to a worldwide resurgence of scientific interest in these animals.

However, at the same time, it opened the floodgates to much unwarranted speculation, especially in popular books on dinosaurs. The media generally fail to distinguish guesswork from observable facts when reporting on dinosaurs. Many visitors to the new dinosaur galleries at the American Museum of Natural History in New York are dismayed to see that the labels for the specimens warn them that certain cherished "facts" represent pure conjecture.



BEHAVIOUR
DEDUCED FROM
FOSSIL EVIDENCE

ILLUSTRATIONS BY JIM STEWART

Hans-Dieter Sues is associate curator in the Department of Palaeobiology, ROM

FICTION THE DINOSAUR

HANS-DIETER SUES

Palaeontologists can take four approaches in looking at the biology of dinosaurs. The most persuasive type of evidence, actual fossilized instances of dinosaurian behaviour, is very rare, but there is one particularly spectacular example of such fossilized behaviour from the Late Cretaceous of the Gobi Desert in Mongolia. A skeleton of the small predatory dinosaur *Velociraptor* is preserved clutching the skull of the small plant-eating dinosaur *Protoceratops*. In turn, the *Protoceratops* has seized the right arm of its attacker between its jaws. The recent examination by a team of British researchers of the bedding and surface texture of the grains of the sandstone entombing the skeletons indicates that a sudden violent sandstorm overcame and buried the two fighting dinosaurs. This unusual occurrence clearly supports the hypothesis that *Velociraptor* and closely related dinosaurs such as *Dromaeosaurus* were active predators. Predatory habits for *Velociraptor* and its kin had long been deduced from the huge slashing claw on the second toe of the foot, the long, grasping hands ending in large claws, and the serrated cutting edges of the blade-like tooth crowns.

Yet even some records of fossilized behaviour are open to alternative interpretations. One such instance is the possible existence of extended parental care in the duckbilled dinosaur *Maiasaura*. The famous Egg Mountain site in northwestern Montana has yielded many nests that contain bones of hatching maiasaurs. The teeth in the little jaws of the babies already show signs of wear. It is reasonable to assume that this wear was caused by chewing on tough, abrasive plant material. However, the leg bones of the baby maiasaurs have poorly developed joint ends, and it appears unlikely that these little creatures could have fended for themselves. According to this scenario, the adult maiasaurs would have brought food to their babies.

Complicating this picture is the fact that the teeth of *Maiasaura* embryos still inside the egg appear to show some wear, indicating that the embryos were already grinding their teeth. Such evidence has also been reported in mammalian em-



BEHAVIOUR
COMPARED TO BIRDS,
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DAY RELATIVES

THE MEDIA GENERALLY FAIL TO DISTINGUISH GUESSWORK...

bryos. Although very suggestive, the fossil evidence for extended parental care in *Maiaasaura* must remain inconclusive.

A second way of looking at dinosaurian biology draws on the fact that, among present-day vertebrates, crocodilians and birds are the closest relatives. We know a lot about these two groups, especially birds, and that knowledge can be used to make inferences about the way dinosaurs may have lived. This approach is particularly useful for reconstructing soft tissues and basic aspects of dinosaurian physiology. If a soft structure is present in both birds and crocodilians it is reasonable to assume that it was also present in dinosaurs. Birds and crocodilians both have a four-chambered heart, and thus dinosaurs probably shared this feature as well. The same holds true if a structure is absent in both groups. However, when a feature is present in only one of them, inferring its presence in dinosaurs already becomes more questionable.

Birds and crocodilians also provide further evidence that at least some dinosaurs may have exhibited parental care. Most present-day birds, including the most primitive species, care for their young. Since birds are direct descendants of small meat-eating dinosaurs, it is reasonable to surmise that parental care already existed in at least their immediate ancestors. The occurrence of some parental care even in the Nile crocodile (*Crocodylus niloticus*) further suggests that this behaviour may have been more widespread among dinosaurs.

A third approach to understanding the biology of dinosaurs uses analogies with present-day animals. The horns on the heads of ceratopsian dinosaurs are similar to those in present-day ungulate mammals. But such similarities can be deceiving. Even among present-day animals, the possibility always exists that a specific anatomical structure has more than one function. Horns and antlers in mammals are used for fighting, but often the mere display of large, elaborate horns or antlers is sufficient to deter a potential opponent. In some animals, horns also aid in thermoregulation. The horns of goats are well supplied with blood vessels, and experimental research has demonstrated that the horns are actually used in cooling the brain when the body temperature rises during vigorous exercise. Similarly, the horns on the heads of ceratopsian dinosaurs may also have served in fighting and display as well as thermoregulation.

In some instances, unusual skeletal features in dinosaurs have no close analogues among present-day vertebrates.

In such cases, palaeontologists must resort to a fourth approach: basing conclusions

on what is known about the physical properties of bones and other tissues in present-day animals. There are no living predators that rival in size that most popular of all dinosaurs, *Tyrannosaurus rex*, a 15-metre-long creature that weighed up to seven metric tonnes and walked only on its hindlegs. In the movie *Jurassic Park*, this monstrous carnivore pursues a car for some distance while the driver desperately keeps shifting gears. Several researchers have recently calculated the actual mechanical loading and bending stresses that would have acted on the leg bones of a running tyrannosaur. They found that the bones would have disintegrated



INTERPRETATION OF
PHYSICAL FEATURES
BASED ON ANALOGIES
WITH TODAY'S ANIMALS

during pursuit at the speed shown in the film.

Estimating the speed of dinosaurs is very difficult. We can make crude calculations by looking at the overall form of the body. The large sauropod dinosaurs with their elephantine legs and feet were perhaps capable of moving very fast for short distances (like a charging elephant) but they were probably not habitually fast runners. On the other hand, the lightly built, long-legged ornithomimids such as *Struthiomimus* ("ostrich mimic") could presumably run at sustained high speeds. The British zoologist R. McNeill Alexander has developed a useful equation to estimate the speed of an animal from the length of its stride and the length of its legs. Although this formula works well for present-day vertebrates, its use for extinct forms is more problematical because the trackways (for measuring stride length) and the bones of the trackmaker (for measuring leg length) are usually not preserved together.

Consider the following scene from a possible sequel to *Jurassic Park*. A pack of four orange-and-black-striped dromaeosaurs pounces on and then swiftly disembowels a greenish-brown duckbilled dinosaur as she looks up from feeding her clutch of hatchlings with regurgitated berries and leaves. How much of this story is scientific fact and how much merely the product of the feverish imagination of an overworked screenwriter?

We can establish with reasonable certainty that *Dromaeosaurus* ate meat, and it could have used the greatly enlarged claw on the second digit of the foot to disembowel prey. Dromaeosaurs and duckbilled dinosaurs are found in the same sedimentary rocks. They presumably lived together in the same region, and therefore dromaeosaurs could have preyed on duckbills. Even a fully grown *Dromaeosaurus* is quite a bit smaller than an adult duckbilled dinosaur, and it is possible that it would have attacked such large prey in packs, much as a pack of wolves can bring down an elk today. There exists suggestive but not conclusive evidence that at least some duckbilled dinosaurs may have looked after their brood for an extended period of time.

We know nothing about the coloration of non-avian dinosaurs. Many dinosaurs had very large eyes, suggesting that visual signs such as colour were important to them, and birds—living dinosaurs—show an incredible variety of colours and colour patterns. What we are left with then is very little conclusive evidence and a great deal of conjecture for the potential movie scene.

Palaeontologists should always be mindful of a wonderfully appropriate observation from the novel *The Go-Between* by L. P. Hartley: "The past is a foreign country; they do things differently there." Non-avian dinosaurs are creatures from a distant past. They are different from any vertebrates alive today, and a great deal of caution is necessary when interpreting their biology. For serious investigators of these remarkable beasts, unanswered questions will always outnumber satisfactory answers. However, even if one takes a more conservative, scientifically rigorous approach to the study of dinosaurs, an aura of mystery surrounds their petrified remains. Dinosaurs will always appeal to the human imagination. ♣

...FROM OBSERVABLE FACTS WHEN REPORTING ON DINOSAURS



PHYSICAL CAPACITY
BASED ON PROPERTIES
OF MODERN-DAY
BONES AND TISSUE

The crusty old rocks of Muskoka form a subtle mix

MAP MUSKOKA ROCKS

MY INTRODUCTION TO THE ROCKS OF Muskoka came as soon as I was old enough to be aware of my surroundings. In the 1930s and 1940s, on the day that school recessed for summer vacation, my parents packed the car, found spaces for my brother and me and our dog among

the luggage, and left for Muskoka to spend the summer at my grandparents' summer home on Mary's Lake. The trip from Toronto was long and dusty; there was no Highway 400 to speed us to cottage country and not all the roads were paved. Invariably we had at least one flat tire and

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with an explosive history

SYDNEY B. LUMBERS

PING OKA'S CKS

plenty of muttering, growling, and outright cursing from all participants, including the dog. But it was all worthwhile, for our reward was two months of freedom to explore the rocks and lakes.

The highlight of the journey was reaching the Severn River where we first saw the wonderful rocks of the great Canadian Precambrian Shield, more than a billion

years old. Many of the longtime inhabitants called the rocks "Muskoka granite." Some told stories of mysterious caves hidden in the rocks and occupied by goblins. Others told tales of great riches: mounds of gold and silver ripe for the taking. I don't recall anyone falling prey to an evil-spirited elf or even striking it rich. Nevertheless, the stories made the rocks all the

more enticing and fired my ambition to explore them.

My dog was also attracted to the rocks. He picked them up in his mouth, dropped them at my feet, and looked at me with his head cocked, as if to say, "OK, smarty, what kind of a rock is it?" No wonder I decided to become a geologist.

The highly contorted and layered rocks of Muskoka are typical of much of the rock found throughout the Grenville Province, the name given by geologists to the southernmost part of the Canadian Precambrian Shield. In Ontario, the northern Grenville Province boundary extends northeast from Georgian Bay to Lake Timiskaming, east of Temagami. The southern boundary is where the Palaeozoic shales and limestones overlie the much more ancient Precambrian rocks near Washago, Coldwater, and Waubesaushene.

Since 1956, much of my geological career has focused on mapping and studying the Grenville rocks. In 1977, I was joined in this endeavour by another ROM geologist, Vince Vertolli. We mapped the rocks from the Ottawa River westward, and in the summer of 1990 we entered Muskoka to make the first comprehensive geological map of this region.

We are not the first geologists to work in Muskoka, nor even the first ROM geologists to do so. Alexander Murray has the honour of being the first geologist to explore Muskoka. In 1848 and 1853, Murray, working for the Geological Survey of Canada, surveyed the rocks and waterways along the Severn and Muskoka rivers. He named Mary's Lake, Fairy Lake, and Lake of Bays. Two future ROM geologists, W. A. Parkes and T. L. Walker, were hired by the Geological Survey of Canada to explore parts of Muskoka in the early 1900s. Parkes repeated many of Murray's surveys in 1900. He also explored Kashe Lake, Black River, and Longford and Oakley townships. Walker made the first geological map of the Muskoka Lakes region in 1905. His hand-drawn map languished in the ROM and was never published. It is reproduced here after 91 years. Another geologist associated with the ROM, Jack Satterly, included portions of Muskoka Lake in his





Para-schist

Ortho-schist

Meta-schist

Anorthosite

Gabbro

Quartzite
Limestone

Tremolite

1941 sketch map of the Parry Sound –Muskoka region published by the Ontario Department of Mines.

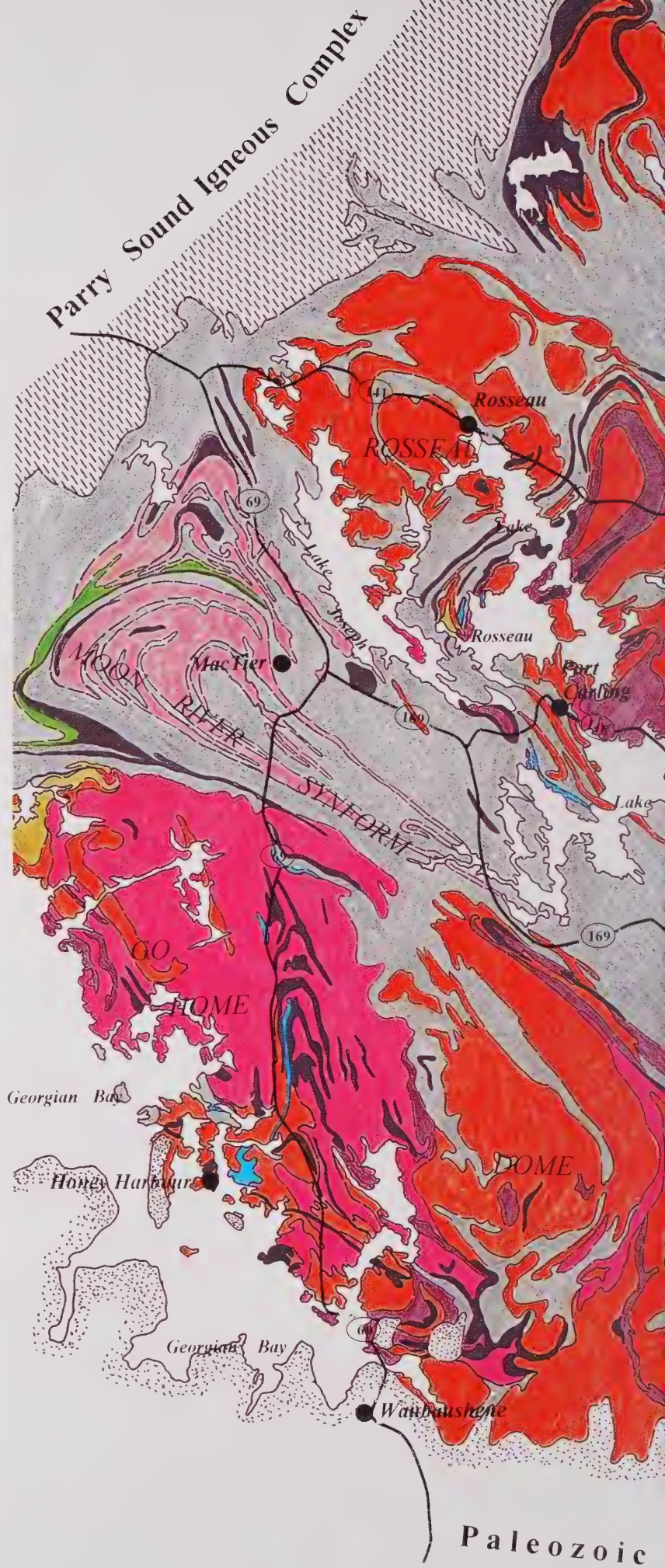
Since Satterly's work, numerous geologists and aspiring students of geology, mostly members of the Geological Survey of Canada and the Ontario Geological Survey, have studied various aspects of Muskoka's rocks. Some of these people produced sketch maps showing various geological features of the region but none produced a comprehensive geological map.

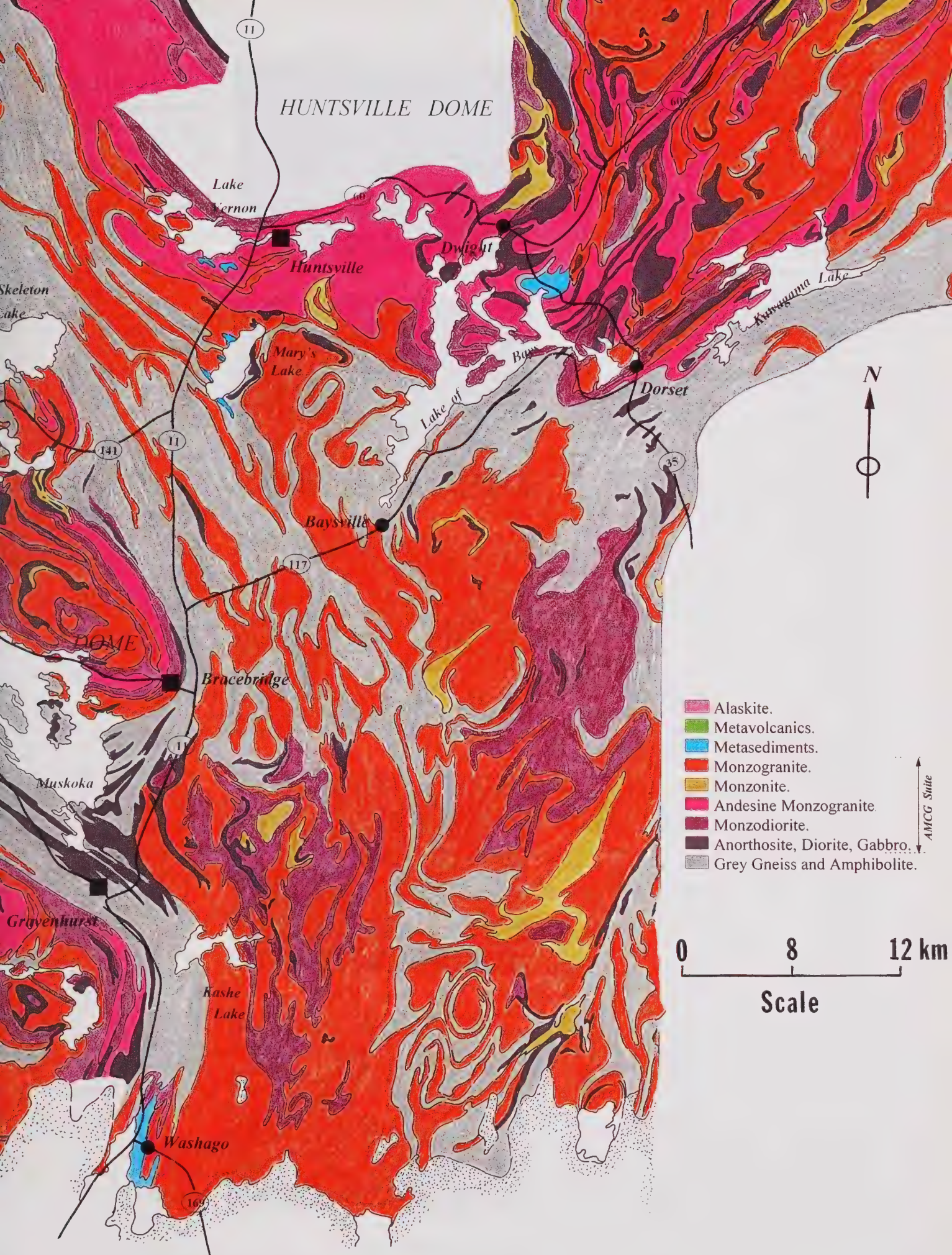
Geological maps are a bird's-eye view of how the various kinds of rocks exposed in a given region are distributed. The rock units are plotted on a basemap showing topographic features, such as roads, lakes, streams, centres of population, and contours outlining hills and valleys. To locate accurately and trace rocks and rock units, geologists use aerial photographs. This information is transferred to the topographic basemap after each day's work in the field. Gradually the geological map takes shape.

Rock exposures, or outcrops as geologists call them, are actual exposures of Earth's rocky crust, and not loose boulders and slabs of rock. Rocky shores and islands in Muskoka's many lakes, and rock exposed in road cuts, are examples of outcrops. Geologists must ensure that mapped rocks are attached firmly to Earth's crust. Numerous geological processes, such as glaciation, can move large pieces of rock considerable distances from their place of origin and deposit them so that they look like outcrops. Mapping such itinerant rocks instead of *real* outcrops could give a completely erroneous picture of the geology.

Normally, Earth's rocky crust is at least partly covered by soils of various types formed by the weathering and erosion of the rocks. In Muskoka, great continental glaciers moved across the land, scraping the soil from the rocky crust and leaving well-exposed rocks with polished surfaces and prominent grooves and gouges. The glaciation began about one million years ago; the last glacier in the Muskoka region began to melt about 12,000 years ago. It left behind a thin discontinuous veneer of

A modern geological map of the Muskoka region was produced by ROM geologists Sydney Lumbers and Vince Vertolli.





HUNTSVILLE DOME

Lake
Vernon

Huntsville

Dwight

Mary's
Lake

Lake of
Bays

Kanagana Lake

Dorset

Baysville

Bracebridge

Muskoka

Gravenhurst

Kashe
Lake

Washago

- Alaskite.
- Metavolcanics.
- Metasediments.
- Monzogranite.
- Monzonite.
- Andesine Monzogranite.
- Monzodiorite.
- Anorthosite, Diorite, Gabbro.
- Grey Gneiss and Amphibolite.

0 8 12 km
Scale

Rocks

AMCG Suite

boulder sand deposited on the crustal rocks by the ice, pockets of sand, gravel, and clay deposited by meltwaters in streams, deltas, and lakes. The lakes, swamps, and rock ridges in Muskoka are a direct result of glaciation.

Meltwaters originally formed huge lakes, much larger than the Great Lakes. Georgian Bay was at one time part of Lake Algonquin, whose easternmost shoreline was in the vicinity of Highway 11. As the ice melted, the land, which was depressed by the weight of the ice, rebounded and rose. The rebound increased drainage, thus allowing water levels of the huge lakes to decrease gradually to the present levels of the Great Lakes.

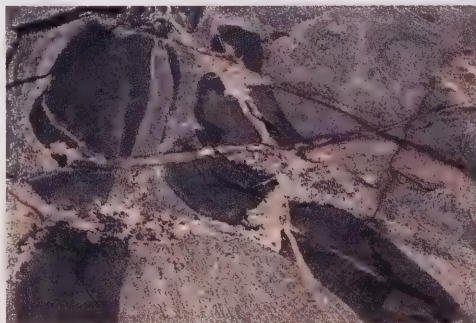
The direction taken by rock ridges is controlled by layering in the rocks. The height and distance between ridges depends upon the physical properties of the rocks and their susceptibility to weathering and erosion. The most erosion-resistant rocks are rich in quartz and feldspar and form the most prominent ridges. Aerial photographs show clearly the structural pattern produced by the rock ridges. Eye-catching ridges outlining folds and oval structures of all sizes are interspersed with gently curved or undeviating ridges. The resulting pattern, which closely resembles the appearance of oil thrown on water, suggests that great forces were at work. Tremendous energy was required to crumple and squeeze the rocks into the flowing shapes.

In a few places the rock ridges are covered by deposits left by the retreating glacier. Sand plains near Gravenhurst, the Muskoka airport, and Bracebridge are locations for some of the most widespread deposits. Because the deposits are scattered and small in area, they are not a hindrance in tracing rock units across the countryside. A much more serious problem is the moss and lichen cover, which must be removed to identify the rocks. Geologists are therefore keen to examine clean outcrops along roads, streams, and lake shores where the vegetal growth on the rocks is at a minimum and the rocks can be accurately identified.

Vince and I have driven every road, sailed all the major lakes and streams in our cartop aluminum boat with its five-horsepower outboard motor, and walked countless kilometres through the bush in search of clean outcrops. When we explain



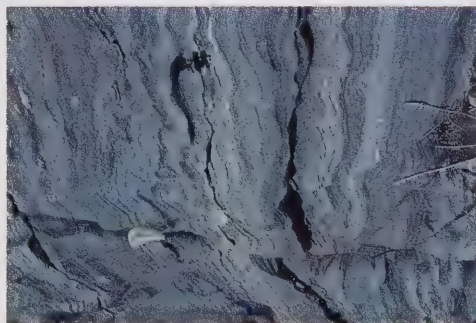
As a result of metamorphism monzogranite grades into diverse, highly layered rocks containing scattered veins and lenses of coarse-grained quartz and feldspar.



Grey gneiss and black amphibolite are the oldest rocks in Muskoka.



White marble (metamorphosed limestone) is shown here in contact with grey gneiss.



Metamorphosed sandstone and shale.



Pink monzogranite is shown containing a dark-grey diorite dike.

to landowners why we want to trespass on their land to look at outcrops, almost all are eager to cooperate. Many, however, think we are a bit batty to be running around looking at rocks all day. "Take all you want," they say, "one rock looks much like another, we've got too much anyway, and there's always more growing."

The dangers of lakeshore geology are few. Dogs living at cottages along the lakes are very curious about our work. Mostly they just bark and yap, but some jump into the water and swim after us. Mink also frequent shorelines, and are much more aggressive than dogs. They will swim out en masse, intent on sinking our boat. When such an attack is being mounted, we have learned to take it seriously and to beat a hasty retreat.

Our geological map of the Muskoka region, illustrated on the preceding pages, is a simplified version of much more detailed maps we are now preparing for publication. The Precambrian Shield rocks (up to a billion years old) are arranged into nine major types. Each type is given a separate colour. The younger Palaeozoic rocks form the southern boundary of the Precambrian Shield and are about 470 million years old. These rocks are mainly fossiliferous limestone and form a horizontal cover over the Precambrian rocks. Shale and sandstone are rare and occur as thin beds interbedded with the limestone. However, where the Palaeozoic rocks come into direct contact with the Precambrian rocks, shale and sandstone, together with conglomerate, can be the main sedimentary rocks present.

In outcrops, each Precambrian rock type varies considerably in appearance. Relatively uniform rock grades into diverse, highly layered rocks containing scattered veins and lenses of coarse-grained quartz and feldspar. This change from uniform to diverse rocks was brought about by metamorphism. After the rocks formed, they were softened by heat in excess of 550°C and at the same time squeezed as if they were in a gigantic vice. The rock actually flowed, producing the complicated patterns evident on our map. Many outcrops preserve vestiges of the original rocks. The chemistry of the original rocks is largely passed on to the metamorphic derivative, thus making possible the identification of even those metamorphic derivatives containing no vestige of the original

rock. The timing of metamorphism is not well known, but many of the rocks show evidence of heating between about 1.0 and 1.1 billion years ago.

Most of the original rocks were igneous or magmatic. Magma is molten rock generated deep within Earth's crust and upper mantle. Most people are familiar with magma when it is erupted upon Earth's surface and forms volcanoes and volcanic rock. The only volcanic rocks in the Muskoka region are in the Healey Lake region, west of Lake Joseph. With this one exception, all the igneous rocks in Muskoka are plutonic. Plutonic rocks form from magma that rises, or intrudes, through Earth's crust and crystallizes *before* reaching the surface. These rocks are also known as intrusive rocks. In Muskoka, the plutonic rocks have been exposed by uplift and erosion over several hundreds of millions of years. This process was complete, however, by the time the 470-million-year-old Palaeozoic rocks were deposited.

The oldest Precambrian rocks, called grey gneisses and amphibolite on the map, are diverse mixtures of greyish layered rocks and dark green to black rocks rich in biotite and hornblende. Tom Krogh and his colleagues associated with the ROM's Jack Satterly Geochronology Laboratory are currently studying the age of these rocks. Preliminary results suggest that they may be 1.6 to 1.7 billion years old. These rocks are highly metamorphosed and give few hints of their original nature. Our work suggests that they were originally plutonic rocks intruded in an island arc or possibly along the margin of an ancient continent. They were probably derived from calc-alkalic granites, diorite, and gabbro, and they probably represent a period of ancient crust formation in Muskoka, 1.7 to 1.6 billion years ago.

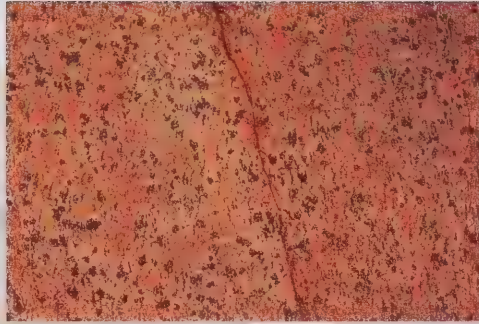
The most abundant rocks are a set of related plutonic rocks that intruded the grey gneisses and amphibolite. Geologists call this set of plutonic rocks the anorthosite-monzonite-charnockite-granite suite, or AMCG suite for ease of reference. The AMCG suite in Muskoka is part of a major 1.47- to 1.36-billion-year-old plutonic event that extended across North America from southern California to Labrador.

Another type of granite called alaskite is common in the Moon River synform. This granite is invariably pink, contains little or no dark minerals, and is rich in quartz and

**Eye-catching
rock ridges
outlining folds
and oval
structures of
all sizes are
interspersed
with gently
curved or
undeviating
ridges.
Tremendous
energy was
required to
crumple and
squeeze the
rocks into
the flowing
shapes**

MUSKOKA'S AMCG SUITE

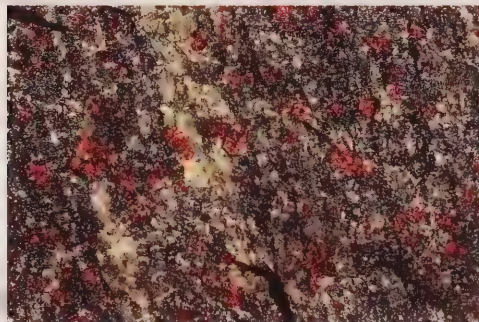
Here pink monzonite contains clots of intergrown dark-green or black hornblende and deep-red garnet.



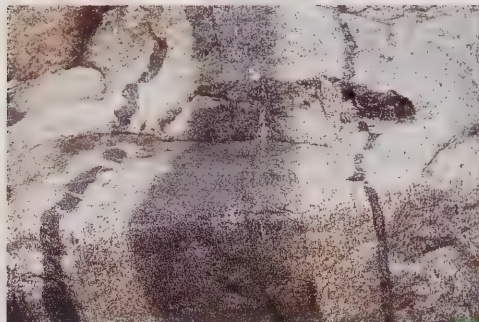
Large deep-red garnet grains are present in the highly layered andesine monzogranite.



Highly layered monzodiorite shows deep-red garnet grains. Monzodiorite is a quartz-poor variety of andesine monzogranite.



Light-grey anorthosite contains layers of dark diorite.



The most abundant rocks in Muskoka date from the Precambrian and are known as the AMCG suite, a set of plutonic rocks that intruded the grey gneisses and black amphibolite, the oldest known rocks in the region. In the Muskoka region, the AMCG suite consists of monzogranite, monzonite, andesine monzogranite, monzodiorite, anorthosite, diorite, and gabbro. The granites and monzodiorites greatly predominate over the other plutonic rocks of the suite.

The granites, monzonite, and monzodiorite are various shades of pink, grey, and green, with pinkish hues dominating in monzogranite and monzonite. Where least metamorphosed, the granites contain prominent crystals of feldspar and abundant visible quartz. Unlike the pink alaskite, monzogranite contains some of the dark minerals biotite, hornblende, and pyroxene; which produce grey-to-green pinkish hues.

Andesine monzogranite is best distinguished from monzogranite by the presence of deep-red garnet grains as much as one centimetre across. Monzonite is similar to monzogranite, but visible quartz is either much less abundant or absent. Monzodiorite is a quartz-poor variety of andesine monzogranite that generally contains abundant dark minerals.

Anorthosite, diorite, and gabbro are composed mainly of plagioclase feldspar and the dark minerals biotite, hornblende, and pyroxene. Anorthosite is about 90 per cent plagioclase feldspar and is commonly white to light grey. This rock grades into diorite and gabbro by an increase in dark minerals. All three rocks are generally found together in the units shown on the map.

alkalic feldspar. It may not be related to the AMCG suite and could be the youngest granite in the region. The only volcanic rocks known are located with the alaskite and could be part of the same magmatic event that produced the alaskite.

Precambrian sedimentary rocks are rare in the Muskoka region. Where present, they consist of marble (metamorphosed limestone), together with metamorphosed sandstone and shale. The largest units are found near Honey Harbour on Georgian Bay, along the northeast shore of North Bay, on Lake Muskoka, near Minett on Lake Rosseau, on Mary's Lake, and near Dorset, Washago, and Huntsville. While the Mary's Lake and Huntsville units are mainly sandstone and shale with little marble, the other units are rich in marble. The metasediments are younger than the plutonic rocks of the AMCG suite, but their actual age remains unknown.

The plutonic rocks of the AMCG suite form three major structured domes, or uplifts, in which the layering in the rocks dips gently away in all directions. The domes are labelled on the map. These domes may be a relic feature formed when the igneous rocks were intruded and pushed up to form a convex surface. The domes were subsequently deformed during metamorphism. Smaller domical structures are also evident in the AMCG suite rocks to the southeast of the three main domes.

The Parry Sound igneous complex in the northwestern corner of the map intrudes the grey gneisses and amphibolite and appears to be part of an extensive pluton (a formation of plutonic rock) of diorite that extends northward from Georgian Bay to south of Lake Nipissing. We are currently mapping this pluton.

After all of our mapping and studying of the Muskoka rocks, I could now confidently answer my dog's questions about the identity of the rocks, if only he were still alive. The fact is that the old-time inhabitants had it right, in one respect, all along. Muskoka really is underlain by various kinds of granite. The mounds of gold and silver, and the goblins, however, have yet to be found. ♡

A wall of rock by the roadside displays a dike of pink alaskite, possibly the youngest granite in Muskoka, which cuts the grey gneiss.



I STILL REMEMBER MY EXCITEMENT WHEN I FIRST LEARNED OF THE reaction of the late Dr. K. S. Lo, a great collector of Yixing teaware, to a Robert Archambeau teapot given to him as a birthday present. He remarked that the teapot must have been made by a person of large physical size.

It is astounding that Dr. Lo, who had never met Robert Archambeau, was able to make an accurate deduction about him based solely on a single piece of his work. It indicates to me that there is something tangible although imprecise—a language or a voice or a sensibility—that is embedded in a potter's work of art, which reflects not only the potter's conscious intent but, if he is good, his innate character as well.

Among modern potters, this “voice” often also carries inflections of a more ancient vernacular. The shapes and patterns of tradition are recog-

CANADIAN

Some of Canada's finest ceramicists

IN ASIAN

RAPHAEL YU

nizable, ancient yet changed, distilled through the potter's unique vision.

In Canada, modern ceramic art embraces a broad spectrum of approaches, styles, and sensibilities inspired by diverse sources. Some of our best contemporary potters and ceramicists have adapted their knowledge of traditional Asian forms and glazes and their feelings for Asian aesthetics to create their own critically acclaimed works. In the examples illustrated on these pages, it is exciting to see the influence, varied in degree and type, of Asian prototypes on modern works. The contemporary pieces are selected from my own collection and are accompanied by traditional works from the collections of the ROM.

THE SHAPE OF ANTIQUE ASIAN CERAMICS IS A common influence on modern pieces. There is an unmistakable resemblance between the *meiping* vase by Canadian potter Harlan House and a Chinese example such as the dark brown *meiping* made in the kilns at Cizhou in northern China in the 12th or 13th century, during the Jin dynasty (AD 1115 to 1234). But some elegant modifications, such as the sudden break in profile in the shoulder of the Canadian piece, bring the ancient shape into the 20th century. This alteration also creates a subtle geometric play between the trapezoidal structure of the mouth of the vase and its intentional echo in the shape of the shoulder.

In colour, the Chinese piece is sombre and subdued while the Canadian piece revels in an exuberant redness. Harlan House's red

This radical change in colour marks a subtle shift in aesthetic sensibility from the Chinese prototype. The Cizhou jar was made as a functional storage vessel for everyday use. Its image is one of austere nobility. The Harlan House piece, though fully functional, was also made as a decorative piece. It conjures up a feeling of graceful fullness, and a touch of lyricism marks the slight flare that has been added to the foot.

— — — — —
THOUGH THE JAR FROM THE YUAN DYNASTY (AD 1271 to 1368) and that created by Wayne Ngan do not resemble each other as strongly as do the first pair, there are clear similarities in form. The 14th-century Chinese piece is a small-mouthed ovoid jar from the Cizhou kilns. The contemporary piece by Wayne Ngan is a stunning inter-

CERAMICS

have adapted Asian aesthetics to create their work

TRADITIONS

glaze, the colour of crushed strawberries, draws on advances in technology that had not yet been discovered in the Song dynasty. In China, it wasn't until the 15th century that a consistent, rich, red glaze was achieved with copper. This technology is complex and through the centuries has remained elusive. Despite modern advances in kiln control, the problem of firing good copper-red glazes persists today, with the success rate hovering at around 20 per cent, even in China.

pretation of that classic shape.

The kilns at Cizhou produced vessels for daily use by ordinary people. These wares were made in great quantity, potted and decorated swiftly. Compared to those fired during the same era for the rich and for the imperial court, Cizhou wares appear clumsy. But their spontaneity, their robustness, and the inventiveness of the potting and decoration more than make up for the lack of finesse.

Raphael Yu is a ceramics collector and curator of the exhibition Reshaping Tradition: Contemporary Canadian Ceramics in Asian Modes, at the ROM until 28 January 1997



Left: Jar in *meiping* form, China, Jin dynasty (AD1115-1234), Cizhou ware type, thrown stoneware, dark brown glaze, George Crofts collection, ROM.
Right: Jar, 1989, by Harlan House, Ontario, thrown porcelain, "crushed strawberry" glaze, private collection.

The Cizhou jar with its voluptuous glaze, its generous, almost rotund potting, and its hearty lugs (or loop handles, used for tying the stopper into the mouth) was made for storing wine. Such jars sometimes bore advertisements for their contents, and the painted inscription on this one metaphorically praises the wine it once held. It reads:

Branches coated with a thin, thin ice of spring;

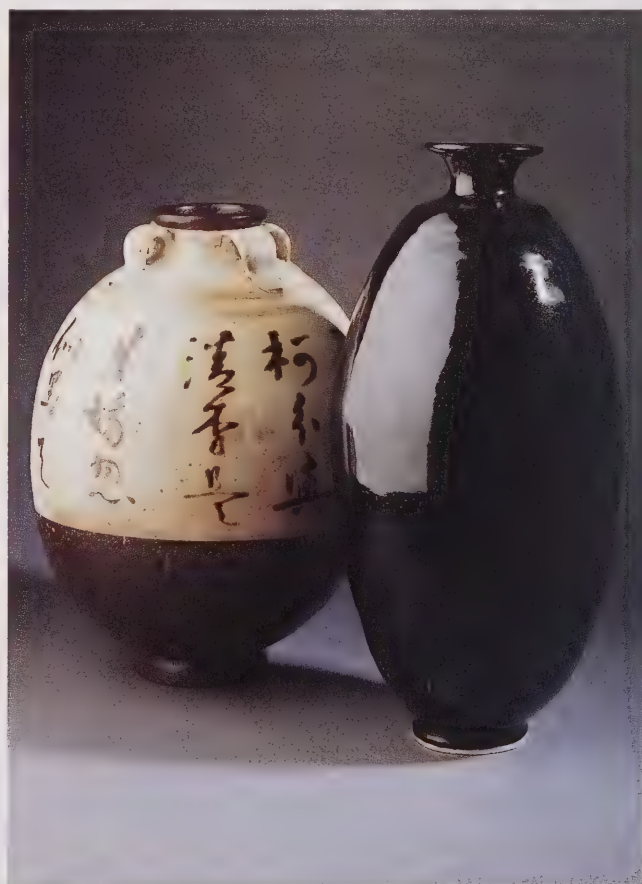
A pure fragrance imparted by the Goddess of the Moon.

It is suddenly, after the long fading of a hot summer, like

The white dance of an old snow-laden pine.

icized for shoddy work. While some of his pieces—and those of other potters so accused—are rightly criticized, I believe that a potter's talent should be judged not by quantity of output, but by the quality of his or her best work.

This jar speaks eloquently in Wayne Ngan's defence. Its glaze is a thick, deep, and dark black enlivened by streaks of blue and brown. The whole surface is electrified with a silvery sheen and the ovoid body is elongated and slightly asymmetric. What is breathtaking is the rapidly ascending shoulder, rising steeply and majestically, almost defying gravity. This upward thrust is gently halted by a small neck with a flat



A sense of abundance, of an endless flow of wine and feasting, is imparted by this message and it is echoed in the distended roundness of the jar's belly. The vessel's intended use as a wine container, its accompanying poetic inscription, and the visual and tactile cues it provides coalesce into a harmonious whole.

Like the potters of Cizhou and numerous contemporary Canadian potters with a prolific output, Wayne Ngan has been crit-

mouth-rim, thereby creating a sense of equilibrium in the jar.



ASIAN GLAZES HAVE HAD A PROFOUND INFLUENCE on contemporary ceramics, particularly the celadon greens and the browns and blacks produced from iron. The Harlan House bowl with a rose flash draws its inspiration from the crackled glazes of 12th- to 14th-century China but offers an interesting contrast to the Chinese pieces.

Left: Jar, China, Yuan dynasty (AD 1271-1368), Cizhou ware, thrown slipped and glazed stoneware with underglaze painted inscription, ROM. Right: Jar, 1986, by Wayne Ngan, British Columbia, thrown stoneware, "Yukon" glaze, private collection.

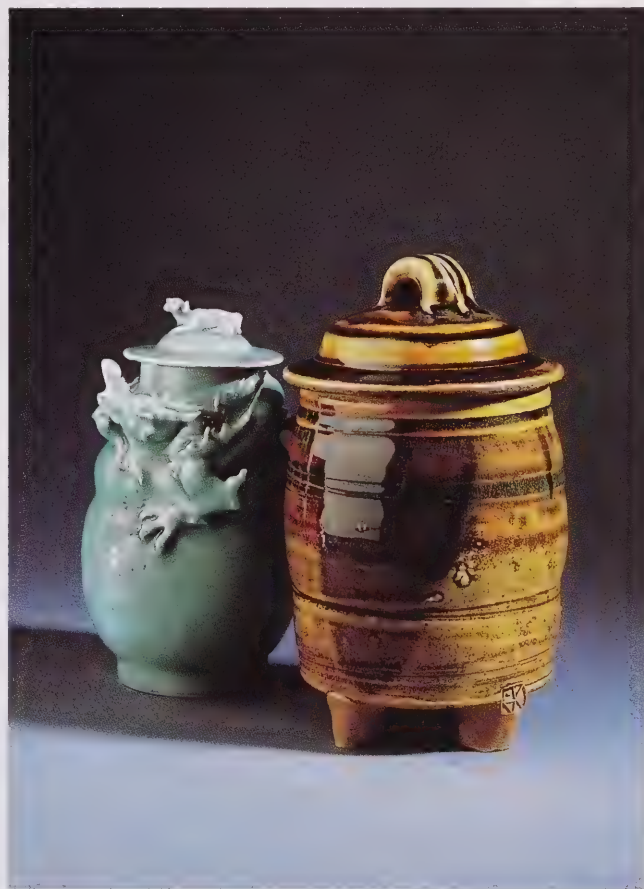
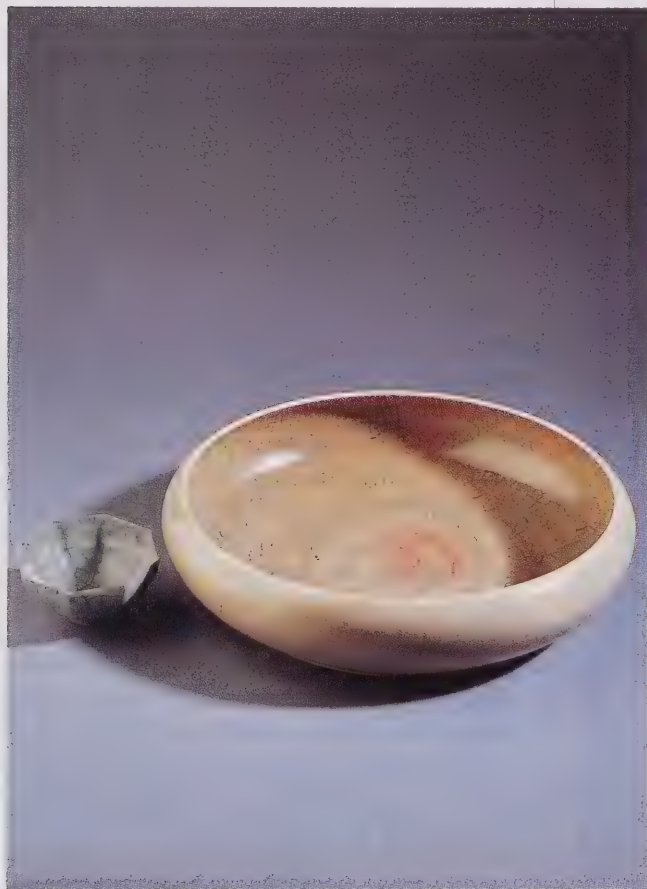


One of the first intentionally cracked Chinese glazes was used in Song dynasty Guan (Official) ware. Margaret Medley, a noted historian of Chinese ceramics, wrote about the glaze in her book *The Chinese Potter* that "the traditions handed down in the [Chinese] literature make it clear that the new ware was greatly admired and valued, and also that it was available in certain qualities." The finest of these, she explained, was a delicate pale grey-blue glaze, widely cracked on a very thin black body. The second quality was duller and greener in colour, more closely cracked and still on a black body. The third quality was al-

for cracked glazes, the Harlan House piece, which draws on Chinese prototypes for its form, exhibits a certain mellowness and a sense of subterranean growth. House calls the glaze "March" because its palette reminds him of the colour quality of the atmosphere and soil he sees from his studio in Lonsdale, Ontario, in that month of the year.

A striking feature of the piece is the rosy flash in its centre. House himself is not completely sure what caused the colourful flash, though it may have resulted from the migration of copper from a red-glazed piece included in the same firing. Some

Left: Cup of octagonal shape, China, Song dynasty (12th to 13th century AD), Guan ware, glazed stoneware, Dr. Herman Herzog Levy Bequest Fund, ROM. Right: Bowl, 1992, by Harlan House, Ontario, thrown porcelain, "March" glaze, private collection.



most a pale grey-brown with a very dark, close crackle on a dark grey body, somewhat thicker than the black one.

These variations in crackle and glaze colour were achieved by changes in the firing cycle, with the crackle resulting from a difference in the rates of expansion between the clay and the glaze. When the piece cooled, the built-up tensions caused cracks to form.

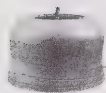
Although it would have measured up poorly against the ancient Chinese criteria

might choose to dismiss the piece as a lucky accident. I prefer to consider it in light of the words of baseball mogul Branch Rickey who said, "Luck is the residue of design."

BEYOND FORM AND GLAZE, OTHER, MORE SUBTLE, Asian influences can be detected in the works of Canadian potters. The sides of two lidded, ovoid jars expand and contract to create slight variations in the diameters of the vessels. But there the physical similarity appears to end. The jar by Canadian

Left: Jar with dragon, China, southern Song Dynasty (AD 1127-1279), Longquan ware, thrown stoneware with applied decorative elements, celadon glaze, gift of Dr. Herman Herzog Levy, ROM. Right: Jar, 1983, by Roger Kerslake, Ontario, thrown stoneware, yellow glaze, private collection.





Jar, 1992, by Robert Archambeau, Manitoba, wood-fired stoneware with bronze lid, private collection. Head of Buddha, North China (15th century AD), George Crofts collection, gift of Mr. D. A. Dunlap, ROM.

potter Roger Kerslake is glazed in a light-hearted yellow. The Chinese jar, a product of the Longquan kilns of south China during the Southern Song dynasty (1127 to 1279), is thickly coated with a distinctly opaque blue-green celadon glaze.

On one level, the potters' approaches differ radically. The Kerslake piece is humorous and playful in intent and design. The random placement of smudges of clay slip on the walls and the tasteful pulling of the knob of the lid add to a sense of movement, a sense of the elasticity and malleability of clay, which pervades the piece. Even the colour of the glaze adds a playful element; the shade of yellow

containment are implicit in the ovoid form of the Longquan jar and in its glaze, though I did not notice this at first glance. My first impression was that the glaze marred the piece because it softened and blurred the fine detail of the spirited hand-modelled dragon on its shoulder. It struck me as slurred, even sloppy—particularly when compared with the crisp incisiveness of most Chinese ceramics. On closer examination, however, it became clear to me that the thick glaze and the blurred details served to reiterate and reinforce the concepts of protection and containment.

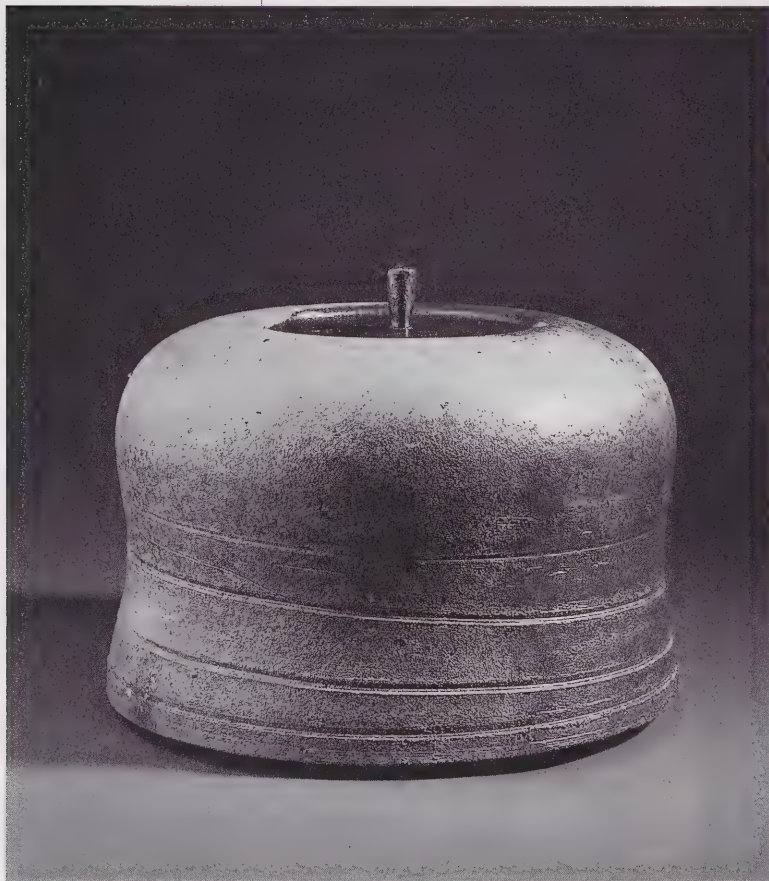
The Kerslake jar, too, conveys these concepts. The indentations made in the body of the jar, and the thick-then-thin pattern in which the glaze pools, suggests threads wrapping around, and partially constricting, its egg-like body.

THE LIDDED JAR BY ROBERT ARCHAMBEAU IS one of a remarkable series made by him for a one-man exhibition in 1992. First, the jars were potted and fired; then bronze lids were specially cast to suit the shape, colour, and texture of each. Although the potting of this weighty jar is economical, and the glazing sparse, the result is far from simple. The rounded shoulder descends majestically to a firm, broad base; the piece projects a strong image of great mass, stability, even solemnity.

The floating-ash glaze, residue from the burning of leaves, straw, or hay in the wood firing, has settled on the body of the jar gently and randomly. The result creates an atmosphere of both movement and repose—a gathering together of energy where the glaze is thick, and expansion into new vistas where the glaze is thin. Most impressively, a certain luminosity pervades the vessel. It conjures up a presence akin in feeling to that expressed in the best of Buddhist art. It is serene and full of magisterial authority. It has an air of detachment, but is irresistibly engaging.

POTTERS THROUGH THE AGES HAVE LEARNED TO manipulate the subtlety and expressive power of clay to express their artistic visions.

What is wondrous to me is that Canadian potters can so unerringly grasp the essence of pottery's ancient forms and sensibilities, never ceasing to create work that continues to amaze and delight. It is to these potters—past, present, and future—that I am forever grateful. ♣



teeters on the indecent. By contrast, the Longquan piece is a funerary vessel of solemn purpose and design.

On a deeper level, however, a common mood does exist. It has been postulated that pairs of such Longquan jars, often one decorated with the green dragon of the East, the other with the white tiger of the West, were filled with aromatic oils and placed respectively to the east and west of the north-pointing heads of entombed corpses. The concepts of protection and



*Child's Swinging Rocking Horse, American or English, 1880–1915,
(gift of Ms. Aleida Waqué) with condition remarks on pre-treatment photo.
The rocking horse is now conserved and on display in the
Sigmund Samuel Canadiana Gallery, Royal Ontario Museum.*

Condition Reports for Your Valued Objects

A CONDITION REPORT DESCRIBES THE condition of an artifact at a particular time and place. It notes any damage, previous repairs, or weaknesses. Such documents are routinely prepared at the Royal Ontario Museum and other collecting institutions for artifacts that are put at the highest risk, such as those destined to travel for exhibition, research, or study. Reports are also prepared prior to and following an object's treatment in a conservation laboratory so that its history is recorded. Condition reports are influential tools in our collections management strategy and help to determine conservation priorities.

However, condition reports are also good to have on hand for collections owned privately. When was the last time you took a good hard look at the artifacts or collectibles in

your care? Have you ever photographed your treasures or jotted down some notes about them?

By assessing the condition of the objects you value and preparing a written record, you provide yourself with the basis for judging just how well your objects are surviving. Most damage to objects results from a poor environment and rough handling. Many objects are affected by changes in relative humidity, temperature, and light. Atmospheric pollution and inappropriate storage materials can also adversely affect them. Museums strive for ideal environmental conditions but these standards are hard to maintain in most homes or offices. However, if you note the condition of your artifacts and their locations, you are more likely to notice problems arising and deal with them in a timely fashion.

Before you move house—be it merely across the street or all the way across the country—the condition of your objects should definitely be noted in detail. More household treasures suffer during transportation than at any other time in spite of careful packing, handling, and shipping.

There are other good reasons for having condition reports. Such reports are extremely useful in the event of a household catastrophe such as fire, flood, or theft, because they provide an easy means of measuring damage for an insurance claim. Likewise, proof of the original condition is needed to determine the lost market value of damaged objects. Also, condition reports can provide professional conservators with valuable information so that they can best treat the damage and

restore an object's original appearance as closely as possible.

HOW TO WRITE A REPORT

The first rule is to keep it simple. Start by making sure that your artifact is accessible and visible from all sides by moving it away or taking it down from the wall. If you place objects on a table, make sure the table is protected. If you must assess objects that are large or heavy, make sure someone can help you move them.

Write your report in pencil so that you do not risk accidentally marking your object with ink as you focus on a detail. Make sure the lighting is good so that you do not miss anything. You will also need a cloth tape-measure, a magnifying glass, and a loaded camera to photograph your objects from every angle.

Begin each report by identifying the piece, and if possible name the materials from which it is made and

the technique used for its construction. Mounts should also be described: for example, "head impaled on metal rod; rod screwed into marble plinth." Frames, backings, glazing, and hardware must be noted: For example, "watercolour matted, framed, glazed, backed with card, two screw eyes secure in back of frame; wired for hanging." Take measurements of the object to indicate its scale or size. Record and locate any inscriptions, numbers, or identifying marks on your object.

Condition is usually expressed in terms of defect or damage with emphasis on structural weakness or basic insecurity. The most serious damage is listed first: for example, "front right chair leg loose at seat join" or "canvas slack in stretcher." Paint that is flaking or lifting from a canvas is serious and should be noted at the outset. Basic instabilities should also be noted, such as a top-heavy sculpture that will not stand unsupported even though it may be perfectly

sound in every other way.

Try to pinpoint the location of damage by measuring from a fixed point such as a mat or frame edge, or by referring to the subject matter or anatomy of a figure. To locate damage on a circular flat object, such as a plate, divide it into quadrants; edge damage can be located as points on a clockface: for example, "1-cm diameter chip loss at 9 o'clock rim." Movable or separate parts are easily lost and should be documented: "seven metal beads hang from forehead band of head-dress." Were there eight beads the last time you looked?

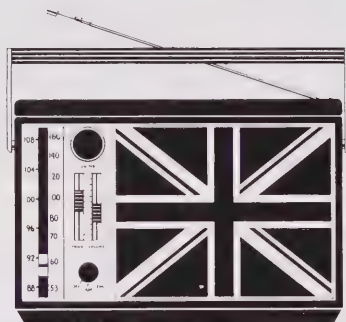
After noting structural weakness go on to cracks, holes, losses, or repairs not affecting structure, as well as replacement parts, dents or distortions (metals), and so on. Move on to more superficial damage, such as scratched varnishes on furniture or paintings, faded pigments or fabrics, damage to ceramic glazes, tarnish on metals, dirt or stains on any material. If your object is in good condition there will be little to say.

It is important to measure pre-existing damage that might change in dimension, such as cracks in wooden objects, areas of missing paint, and tears in paper, textiles, or skins. Any change revealed by a later check should be dealt with immediately. Given this information, a conservator may be able to offer useful advice on avoiding or minimizing similar damage in the future.

Finally, take photographs to complement the written reports. If the details you describe show poorly, mark them on the photographs. When you are finished, file your reports appropriately, perhaps with your household insurance papers. By taking note of the condition of your objects now, you may prevent a small problem from becoming a major one.

SUSAN RICHARDSON
Susan Richardson is the documentation officer in the Conservation Department, Royal Ontario Museum

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❖ ROM ANSWERS ❖

Dear ROM Answers,

I am curious about two pieces of furniture in my house. The first is a carved wooden chest which was given to my mother Hazel Beatrice Kemp, in 1911 by her "honorary" uncle, Arthur Warren (c. 1850 to c. 1920). It was possibly intended as a "hope chest" on the occasion of her engagement to my father, F. Chatten Stephens of Montreal. Arthur Warren was a friend of my maternal grandparents, Sir Albert and Lady Kemp, whose Toronto home was known as "Castle Frank." Because he died before I was born, I know little of Mr. Warren's life; however, he seems to have been a man of means. From her early childhood onward, he gave my mother very generous and tasteful gifts. Several of his early 19th-century children's books that he gave are now in the world-famous Osborne Collection owned by the Toronto Public Libraries. A few years ago, Black Creek Pioneer Village exhibited a doll's house that he had built for her. The top of the chest is 122 cm x 50.2 cm and the height, 61 cm. It is boldly carved with leaves, fruit and flowers and, in upper case over the central keyhole, it is inscribed: "HAZEL BEATRICE KEMP/1911."

The second piece is what I refer to as the "blue lacquer chest." The base has three drawers and bracket feet, and the upper section, a cupboard with two doors. Height is 188 cm; width, 96.5 cm; depth, 50.8 cm. It was purchased in London, England, by my mother, Hazel B. Kemp Colville in 1922-23. Her uncorroborated story was that the chest is Euro-



pean, late 18th-century, with lacquer decoration added in the Far East. As you can see in the photograph, the lacquer finish is now badly damaged. Some thirty years ago, I had the middle drawer restored, but was told that further restoration might impair the antique status of the piece. I feel that it might not stand another move without damage to the lacquer, although it is otherwise sturdy and in daily use. I would happily donate it to a suitable institution that wants it, either before or after restoration. Any help that you can provide will be most appreciated.

F.E.B.

OAKVILLE, ONTARIO

Dear Reader,

I am afraid that I am at a bit of a loss in identifying and dating your two pieces of furniture because you have not provided any photographs of the structure of drawers, doors or, in particular, the interior of the chest. Often construction details are the most telling evidence for dating fur-

niture. The other thing that causes dating problems is the tendency of many of the wealthiest families during the early years of this century to purchase reproductions and "improved" pieces. These were readily combined with genuine antiques when furnishing homes. Sometimes, they were appreciated even more because their dimensions were more suitable for early 20th-century domestic interiors, which seldom were as architectural and expansive as those of important Georgian houses.

Your mother's oak chest follows the form and decoration of many that were made during the 1600s in England. Production of this type of useful storage chest continued into the 1700s. Many of the plainer versions were re-carved at a later date to make them more attractive and collectible. Genuine pieces were constructed of wood that was left very rough on the bottom and back, where you did not see it, and crudely finished on the interior. The mortise-and-tenon frame was held together

If you possess furniture, silver, glass, metalwork, ceramics, textiles, or small decorative objects that may have an interesting past and have aroused your curiosity, this column is for you. Send a clear black-and-white photograph (or 35-mm colour slide) of the object against a simple background, providing dimensions, a description, any markings, or any known details of its history to: ROM Answers, c/o Rotunda Magazine, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, M5S 2C6. Be

sure to enclose a stamped, self-addressed envelope large enough to include any photos that we must return to you with the reply.

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by pegs. The legs/uprights at the corners are often not exactly square with the inside being coarsely finished and sometimes having a large portion trimmed away. Old chests of this type will show wear, cracking, dirt, and sometimes even worm holes.

I suspect that your mother's chest was constructed fairly close to 1911 because the carving is remarkably detailed and sharp. On the genuine examples, it is crudely rendered in low relief with obvious indications that it was spaced with the help of a compass. The arches with symmetrical palm branches along the bottom are rendered in high relief with sharp angular central ridges down the centre of each leaf. Other details are equally sharp, far busier than 17th-century examples, and display none of the wear that would be expected.

Your bureau with cupboard is also somewhat confusing. The case is perhaps an old one, and if it is will exhibit appropriate wear where the drawers have been slid in and out. Wood on the back and bottom will be more crudely finished and show a build-up of dirt from the years and open fires. I can't decide whether I am seeing bare pine or spruce where the finish has come off the drawers. This is a traditional form of English storage furniture, usually associated with bedrooms. Without any structural details, I do not want to be more specific as to its age. The gold-painted border of what looks like icicles just below the top cornice moulding is a type that I have not seen on authentic old examples. A band of laurel leaves, egg-and-dart, or other classical motif is commonly found on old examples. Here, the "icicles" may be a later designer's idea of a more appropriate chinoiserie motif.

I am reasonably certain that lacquer finish was added in the early years of this century. During the 1920s, chinoiserie-style furniture was very much in vogue, and many pieces were given an appropriate finish in imitation of 17th- or 18th-century lacquer or its English equiv-



alent, "japanning." Like other Western imitations, English japanning was created using gesso (a plaster compound), paint, metallic powders, and varnish. Even though later decorators who tried to revive this technique worked hard to imitate the old lacquer and japan finishes, anachronisms invariably crept in. Your lacquer finish imitates the old blue-green finishes of the early 1700s. However, it includes strong patches of red and green on the motifs, which were not used at the time and not found on Eastern lacquer. The close-up of the lady on the right door shows that she has a very sweet early 20th-century style face, a considerable amount of the creamy colour that I have seen on early 20th-century work, and a fine crackling to the finish that may have been intentionally created to suggest a period finish.

The other feature that is strange is the manner in which the base is cut out around the bracket feet. It seems to be meant to suggest the outline of the top edge of a Chinese reserve panel. I have never seen this kind of a bracket foot on an authentic piece of English furniture. Either this is an old piece, where the profile of the bracket feet and the old apron were altered to make it look more "Chinese," or the piece was

deliberately made this way to fit in with the chinoiserie theme and is a late example of case furniture.

From what I can distinguish from your photographs, the brass "bat-wing" drawer pulls are in the style of the early 1700s, and the design of the key-hole escutcheons may also derive from this period. The brass hinges on the cupboard doors could also be 18th-century types, but they appear a little more exposed and cruder than those I have seen on furniture with an authentic period japanned finish. Brass hardware is always a problem on furniture since reproductions of period styles are still being made, especially in England, and many authentic pieces have had their hardware replaced/updated, either by previous owners or recently by dealers.

Restoration of japanned finishes is usually very expensive. You would have to contact Mr. Ray Tokarek of the ROM Conservation Department (Tel. 416-586-5717) to make an appointment. Bring him a drawer to see. Based on photographs and inspection of an actual part, he will be able to tell you more. He can also recommend restorers whom you can ask to quote on the work.

I regret that I cannot be more optimistic about these two pieces. On the positive side, there is an Italian commode (accession number 957.273) that belonged to Lady Kemp, which is on display at the beginning of the Neo-classical section of the new Samuel European Galleries. The commode dates from about 1760-1780 and has figured walnut and ivory veneer. The Department of Near Eastern and Asian Civilizations recently received a Japanese embroidered silk parasol that is supposed to have belonged to her. I have heard her name mentioned frequently by senior Torontonians as a great arbiter of taste and a real lady. So, although these pieces may not be old, they belonged to people with educated taste. Thank you for your enquiry.

PETER KAEELGREN
DEPARTMENT OF WESTERN
ART AND CULTURE

Whistler, Building Bridges, Babylonia, Roycrofters, and more...

IF THE AIDS PANDEMIC HAD NOT PUT gay males in a new and tragic light, poor Oscar Wilde would probably be enjoying a comeback these days because the arts scene of the 1890s is coming under affectionate scrutiny as the 1990s draw to a close. In this regard there has been a big—and I do mean big—revival of interest in that strikingly similar individual, the painter J. M. Whistler.

Wilde and Whistler were contemporaries and each was a commanding presence in the London of the late 19th century. But they were more than that. They were also champions of the new aestheticism, the cult of *l'art pour l'art* that was the herald of so much that would be new when the odometer clicked over into the 20th century. Each was the wittiest member of his respective discipline. Passing through customs, Wilde made the now-famous statement that he had nothing to declare but his genius. When an admirer told Whistler, "There are two great painters, you and Velázquez," Whistler replied, "Madam, why drag in Velázquez?" Wilde and Whistler were two of the most prodigious workers of their time. Certainly they were two of its most theatrical personalities. And each was brought down by scandal.

Barring the discovery of some mass of new documents, it's unlikely that the 1988 biography *Oscar Wilde*, by the late Richard Ellmann (available as a Penguin at \$12.95), will ever really be supplanted. But Whistler is a person who seems to attract biographies in every succeeding generation, going all the way

back to those by people who actually knew him, such as the critic Sadakichi Hartmann. The newest biography, which coincides with an array of other Whistler books, themselves tied to a rash of major exhibitions, will do just fine. **James McNeill Whistler** by Ronald Anderson and Anne Koval (Publishers' Group West, \$30) explores quite fully a story that the world apparently loves to hear repeated.

Whistler was born in New England in 1834 but liked to tell people he was a Southern gentleman. "I shall be born when and where I want," he said, "and I do not pick Lowell, Massachusetts." Well, he looked like a Southern gentleman: tall, slim, and aristocratic in his frock coat, and with his long black moustache. His father was an engineer, so he had a peripatetic childhood, living six years in St. Petersburg, Russia, before returning to the United States to attend West Point. He was first in his class in topographical drawing but failed math. As a result he wasn't commissioned as an army officer with his classmates in 1851, which is all to the good, as so many of them were to die in the Civil War. He travelled first to Paris in 1855 and then, in 1859, settled in London, the centre of the art world that he would be at war with for the next 30 years, all the while supporting himself with portrait commissions.

His important work was in three distinct areas—painting, etching, and writing, which are best appreciated all together. As Deanne Marohn Bendix reminds readers in **Diaboli-**

cal Designs: Paintings, Interiors and Exhibitions of James McNeill Whistler (Scholarly Book Services, \$34.95 paper), Whistler was not only a bridge between the British and French schools of painting but also between Japanese and Western art. His wonderful skill as an etcher went hand-in-hand with the role he played in the painting revolution led by such people as Cézanne and Degas. No one mentions him in the same breath as Cézanne but ardent Whistlerites have been known to compare him not only with Degas but with Manet. One can certainly make a clear case for his influence on Monet, particularly with one of his "nocturne" paintings, *Nocturne in Blue and Gold: Old Battersea Bridge*.

Whistler called the paintings nocturnes because he liked to depict cityscapes at night, just before first light. But he also used the term because he believed painting was directly comparable to music, that it was a tonal art. Well, it certainly was the way he practised it. He borrowed from Japanese woodblock prints and from etching the idea of shading in broad bands across the composition. He was a figurative artist, but was not trying to reproduce nature. The subject of his painting was painting itself. To this end, as a kind of proto-abstractionist, he found the foggy Thames the perfect place to work. It would enrage him to know that his single most-reproduced image, which he entitled *Arrangement in Grey and Black: Portrait of the Painter's Mother* (1871), is now known universally as "Whistler's Mother," as though his

mother, and the not the arrangement of the greys and blacks, was of prime importance. He despised motherhood, worship of country scenes, and all the other sentimental clutter of his time.

One of his series of nocturnes brought about his downfall. In perhaps the most often quoted review of the 19th century, the critic John Ruskin wrote that he “never expected to hear a coxcomb ask 200 guineas for flinging a pot of paint in the public’s face.” Whistler took him to court for libel, and won—but was awarded damages of only a farthing and was saddled with the court costs. These bankrupted him and he was actually homeless for a time. He tried to recoup some of his losses by writing his now-famous book, *The Gentle Art of Making Enemies*. But he was on a downward slope, even to the extent that he went to Chile for a while to help the people there fight for independence from Spain. He had fathered three illegitimate children before he found late in life his true love, Beatrice Godwin, who died of cervical cancer eight years later, leaving him crazed with grief.

Among all the other new books on Whistler, the most useful in its breadth is **Whistler on Art: Selected Letters and Writings**, edited by Nigel Thorp (Scholarly Book Services, \$15.95 paper). With **Kindest Regards: The Correspondence of James McNeill Whistler and Charles Lang Freer, 1890-1903**, edited by Linda Merrill (Scholarly Book Services, \$21.95), focuses on the relationship between the painter and his most important private patron, an American, telling us a good deal about the political economy of art in late Victorian and early Edwardian times. Still more specific is Edgar Munhall’s **Whistler and Montesquieu: The Butterfly and the Bat** (Flammarion, \$67.50). Whistler used the butterfly as his emblem and signature while Montesquieu, the French poet, used the bat. The book tells the story of a single painting, *Arrangement in Black and Gold*:

Comte Robert de Montesquieu. The work had a long gestation period: Whistler plugged away at it for nine years. It’s now in the Frick Collection in New York, where it was recently the cornerstone of yet another Whistler exhibition.

SOME OTHER NEW BOOKS OF INTEREST to *Rotunda* readers:

• Henry Petroski’s **Engineers of Dreams: Great Bridge Builders and the Spanning of America** (Random House of Canada, \$42) contains some fresh tidbits relevant to Canada. One example is the fact that the great English railway engineer Sir Benjamin Baker (1840-1907), who with John Fowler designed and constructed the Forth Rail Bridge in Scotland, Victoria Station in London, and much of the Metropolitan Railway, got some of his basic ideas about the cantilever principle from the Canadian Pacific Railway. It seems he studied the CPR’s rough engineering sketches in the British Museum. Petroski also devotes an appropriate amount of space to the Quebec Bridge, which was begun in 1900 and crosses the St. Lawrence River near Quebec City. It was intended to be the longest steel cantilever bridge in the world. In 1907, when the bridge was still under construction, one of the cantilevers fell, killing 75 people, mostly Natives from the Caughnawaga Reserve near Montreal. A second disaster came in 1916, the year before the official opening, when a new centre span plunged into the river, taking another 13 lives.

The thrust of *Engineers of Dreams*, however, is the battle of ideas among American bridge entrepreneurs, each with a favoured design whose feasibility had to be proved. The competition involved such challenges as the wire suspension bridge and the construction of the first bridges (other than ice ones, that is) across Niagara. One leading player was Charles Ellet, who was way ahead of his time conceptually, but whose bridges almost always collapsed. His rivals were the Roeblings—John Augustus and

Washington, father and son—whose greatest work was the Brooklyn Bridge.

• **Babylonians** (University of Oklahoma Press, \$28.50) by H. W. F. Sagg, a British linguist and historian, skilfully brings together, summarizes, and enlivens the cumulative understanding of the ancient Mesopotamian empire, Babylonia, and its capital, Babylon. This understanding is derived from that culture’s surviving cuneiform writings, archaeological research, and Jewish and early Christian texts (“the Babylonian captivity,” for example). From our schooldays I suppose we all remember learning about the Hanging Gardens of Babylon, one of the Seven Wonders of the ancient world, and about the fertile crescent of the Tigris and Euphrates rivers, which was especially fertile in ideas. The empire, established about 1750 BCE, contributed innovations to fields as different as astronomy, law, and engineering. Some of the advances survived through their transmission to other cultures to influence medieval Europe long after Babylon was destroyed by the Assyrians about 589 BCE, and hundreds of years after the empire itself had fallen apart.

• **Head, Heart and Hand** by Marie Via and Marjorie B. Searl (University of Rochester Press, \$US49.50) is a study of Elbert Hubbard, the printer, designer, writer, and windbag who popularized William Morris’s ideas about the necessity of reviving the craft tradition in printing, furniture, metalwork, and so on. In 1895 Hubbard founded the famous Roycrofters Shop, a design house and crafts commune at East Aurora, New York, near Buffalo. From then until 1915, when he was lost in the sinking of the *Lusitania*, he devoted himself to putting a distinctively American face on the Arts and Crafts movement—indeed, making it into a major business enterprise, which in a sense missed the point.

Yet who hasn’t been attracted at one time or another to the faux-medievalism and mass-produced “craftsmanship” of Roycrofters and

the larger movement from which it derived? Affection and even respect for Hubbard's ideas about wood-grain and earth tones and sturdy, practical shapes is still evident. For the popular audience there is, for example, **The Bungalow: America's Arts & Crafts Home** by Paul Duchscherer and Douglas Keister (Penguin Canada, \$35), a text-and-photographic survey in the familiar coffee-table format. For more serious students the most conspicuous new book is **The Substance of Style: Perspectives on the American Arts and Crafts Movement**, an Anglo-American essay collection edited by Bert Denker (University Press of New England, \$39.95). Both coincide with various museum exhibits on the Arts and Crafts movement these days. Perhaps the trend is another example of the centennial and even millennial reflection that is sending us back to Whistler as well.

- The word genius as we use it today, to describe someone of towering artistic or intellectual force and originality, dates back only to the mid-18th century, when Henry Fielding coined the term in his novel *Tom Jones*. At the start of the 20th century, the American critic Bernhard Berenson popularized the idea that the emergence of the lone genius—a Michelangelo, say—is what set the Renaissance apart from the Middle Ages. In fact, as we all know, artists of the Renaissance depended to what now seems an unnatural degree on a complex web of apprentices, students, and artisan cadets to do much of the repetitious dog-work. What, then, was the true relationship between high art and mere craft? A panel of curators and others masticate the question thoroughly—and with illuminating results—in **The Craft of Art: Originality and Industry in the Italian Renaissance and Baroque Workshop** edited by Andrew Ladis and Carolyn Wood (University of Georgia Press, US\$40.) Highly recommended.

DOUGLAS FETHERLING

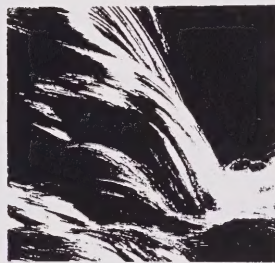
Douglas Fetherling is book review editor of Rotunda

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Ahead of the Crowd

THIS MALE BEETLE IS CERTAINLY ONE OF THE MOST REMARKABLE LOOKING insects collected during the ROM's ongoing biodiversity survey project in Indonesia. What is even more remarkable is that it has a name. At best, only about one-tenth of all insect species are known to science.

This species was described in 1863 as *Diateliium wallacei* in honour of the collector Alfred Russel Wallace, the originator with Charles Darwin of the theory of natural selection. Wallace collected his specimens in Sumatra and Borneo while on his historic voyage through the Malay Archipelago, which began in 1854. In the intervening 142 years only about 50 specimens have made their way into natural history collections. Eight specimens have been collected during the first five years of this project, enhancing the collections of both the ROM and the Museum Zoologi Bogor, the national museum of Indonesia.

And what is the special function of the almost monstrously elongated head? The heads are much more elongate in males, suggesting that this is another example of the flamboyance in structure caused by sexual selection. The same factors that have produced the impressive antlers in male deer and the gaudy plumage of peacocks—fickle females and competitive males—have probably resulted in the elongate heads of the males of *Diateliium wallacei*. ❖

TEXT BY CHRIS DARLING, PHOTOGRAPH BY JOHN MITCHELL

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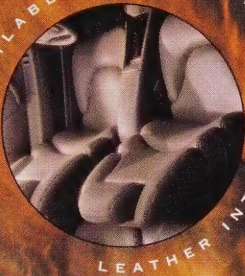
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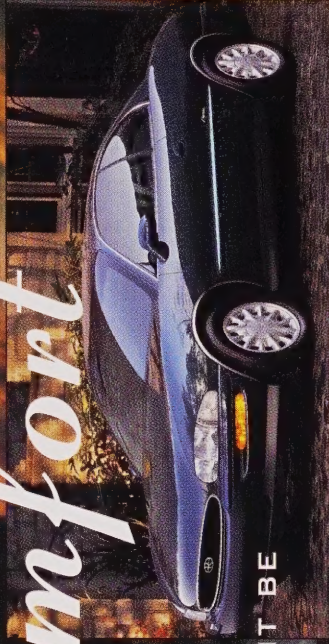
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